

Keeping Well

Healthy Skin in Greater Wellington

Protocols for the Management of Skin Infections in Children and Young People, in Community and Primary Health Care Settings, Wellington Sub-Region

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Healthy Skin in Greater Wellington,
Regional Public Health, Hutt Valley DHB, Wairarapa DHB and Capital & Coast DHB.

Contributors

These protocols have been prepared by Regional Public Health with advice and assistance from the Healthy Skin in Greater Wellington protocols sub-group:

- Dr Adrian Gilliland, Clinical Advisor Primary and Integrated Care, C&CDHB; GP Ora Toa Medical Centre
- Dr Nikki Blair, Community Paediatrician, C&CDHB
- Debbie Rickard, Child Health Nurse Practitioner, C&CDHB
- Theresa Fowler, Nurse Consultant Primary and Community, HVDHB
- Vicky Noble, Director of Nursing Primary Health Care and Intergrated Care, C&CDHB
- Maureen Stringer, Outreach Nurse Team Leader, Care Plus Manager, Valley PHO, HVDHB
- Elaine Ete-Rasch, Public Health Nurse, Regional Public Health, HVDHB
- Mary Strang, Public Health Advisor, Regional Public Health, HVDHB

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These protocols have been endorsed by the following groups and organisations:

Regional Public Health

Wairarapa District Health Board

Cosine Primary Health Organisation - Karori Medical Centre

Cosine Primary Health Organisation - Ropata Medical Centre

Well Health Primary Health Organisation

Ora Toa Primary Health Organisation

Compass Health Clinical Quality Board

Capital and Coast District Health Board - Primary Secondary Clinical Secondary Group

Capital and Coast District Health Board - Infectious Disease Department

Capital and Coast District Health Board - Department of Child Health

Hutt Valley District Health Board - Paediatric Department, Hutt Hospital

Hutt Valley District Health Board - Primary Secondary Strategy Group

Te Awakairangi Health Network

Disclaimer

These protocols aim to provide guidance for health professionals and allied workers in the prevention, assessment, management and treatment of common skin infections. While every effort has been made to ensure that the information herein is accurate, Regional Public Health takes no responsibility for any errors, omissions, or for the correctness of, the information contained in these papers. Regional Public Health does not accept liability for error or fact or opinion, which may be present, nor for the consequences of any decisions based on this information.

Abbreviations

CCDHB	Capital and Coast District Health Board
DHB	District Health Board
GP	General Practitioner
HVDHB	Hutt Valley District Health Board
HSGW	Healthy Skin in Greater Wellington
PHO	Primary Health Organisation
RPH	Regional Public Health

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Introduction

The Keeping Well, Healthy Skin in Greater Wellington (HSGW) project was established in 2011 to address the high rates of avoidable hospital admissions from serious skin infections amongst children in the Greater Wellington region. The project is a collaborative effort including Regional Public Health, the Hutt Valley DHB, Capital and Coast DHB, Wairarapa DHB, Compass Primary Health Care Network and Valley Primary Health Organisation.

Hospital admissions from serious skin infections are preventable if detected early and adequately treated in a timely manner. There is currently no known national guideline available for the management and treatment of skin infections in the community and primary health care setting. The significantly high number of skin infections in children and young people in the Wellington Sub-Region warranted the need for protocols to provide consistency and guidance for health professionals.

Aim

The aim of these protocols is to promote evidence-based practice for the prevention, assessment, management and treatment of skin infections in children of 1 year to 25 years of age and therefore to reduce the burden of skin infections in our communities and progression to serious skin infections requiring hospitalisation.

It is expected that these protocols will form the basis for the management of skin infections for children and young people, in the community and Primary Health Care settings in the Wellington Sub-Region.

Scope

These protocols are for use by general practitioners, primary health care nurses, school health nurses, public health nurses and pharmacists – all working within their respective professional scopes of practice.

They aim to guide best practice for the prevention, assessment, management and treatment of skin infections in patients aged 1 year – 25 years in the Wellington sub-region (the catchments of the Wairarapa, Hutt Valley and Capital and Coast DHBs), in the community and primary health care settings.

The protocols include prevention measures and the management of some skin conditions that can lead to skin infections and bacterial skin infections, both with and without the use of antibiotics or other prescription medication.

For the purposes of these protocols the most common bacterial skin infections covered are impetigo, boils, cellulitis, human and animal bites. Other minor skin conditions included which are problematic in the community and are known to lead to serious bacterial skin infection are insect bites, scabies, and headlice.

This protocol does not replace the need for competency and experience in the diagnosis and assessment of skin conditions which can be complex and difficult to diagnose accurately. If there is any doubt in the diagnosis and assessment of the skin condition, advice should be sought from a more experienced health care practitioner.

Where the supply of a particular healthcare treatment required is outside the scope of that health care practitioner, a referral should be made to a health care practitioner who is able to provide the recommended treatment.

Standing Orders

The clinical sub group of HSGW encourages all clinical teams to consider the development of standing orders to support implementation of *Protocols for the Management of Skin Infections in Children and Young People, in Community and Primary Health Care Settings, Wellington Sub-Region 2012*.

A valuable definition is put forward by the Ministry of Health (2012):

A standing order is a **written instruction** issued by a medical practitioner or dentist. It authorises a specified person or class of people (eg, paramedics, registered nurses) who do not have prescribing rights to administer and/or supply specified medicines and some controlled drugs. The intention is for standing orders to be used to improve patients' timely access to medicines; for example, by authorising a paramedic in an emergency or a registered nurse in a primary health care setting (p. 1).

Standing Orders Guidelines 2012 take into account the changes made when the Medicines (Standing Order) Regulations (2002) were updated in August 2011. These Guidelines provide guidance on the development and operation of standing orders and assist providers to comply with the regulations. They describe in detail the roles, responsibilities and accountabilities of not only the issuer but also the person supplying and/or administering medicines under a standing order. A Standing Order template guide is provided. (See Appendix H)

Background

New Zealand literature reveal serious skin infections are a significant disease burden among New Zealand (NZ) children (Craig, Taufa, Jackson, & Han, 2009; O'Sullivan, Baker & Zhang, 2010). Hospital admissions for cellulitis for NZ children are double the number of other developed countries such as Australia and United States of America (Hunt, 2004).

Skin infections are a heterogenous group of skin conditions most frequently caused by pathogens such as *Staphylococcus aureus* and Group A Streptococci (Bamberger & Boyd, 2005; Stulberg, Penrod, & Blantly, 2002). If not adequately treated in a timely manner, they can lead to serious, systemic infections requiring intensive medical and surgical interventions. Risk factors for skin infection are multi-factorial and include low socio-economic position, household crowding, poor access to medical care and medical or surgical co-morbidities. Skin infections that are left untreated or poorly managed can develop into serious complications such as infections of the kidneys, bones or blood infections.

The most current epidemiology review of skin infections in NZ shows the incidence rate almost doubled since 1990 (O'Sullivan & Baker, 2010; Baker & Barnard, 2012). In the Wellington region, the number of serious skin infections for children aged 1-14 years was noted to rise significantly in the C&C DHB and Hutt Valley DHB for the years 2002/03-2008/09 (Thompson, 2010).

The literature shows consistency in the prevalence of poor skin health of children throughout NZ. The highest rates were observed in boys and preschool aged children. Maori and Pacific children and those living in deprived neighbourhoods were seen to be affected mostly. The rates were increasing among these groups at both Capital & Coast and Hutt Valley DHBs. The admission rates for Hutt Valley DHB were higher compare to the national rates, with areas such as Naenae, Taita and Eastern Porirua highly affected (Thompson). These geographical areas are within the NZ Deprivation score of 10 which are classified as the most deprived 10 percent of all areas in New Zealand.

Wairarapa DHB was not included in the 2010 report, but anecdotally this population has high rates of children with skin infection requiring hospitalisation. Maori and Pacific children aged 0-16 years are disproportionately represented in Ambulatory Sensitive Hospitalisations (ASH) admissions for cellulitis. In 2011, Maori accounted for 42% of admissions, Pacific children 21%, and 36% for “other” children. (Personal communication from Sarah Dewes, the public health advisor for the Skin Infections Project in the Wairarapa DHB.)

A recommendation for evidence based management of skin infections was highlighted in the literature. In order to reduce the burden of serious skin infections, it is important that effective care and management is accessed in the community sooner. Public health and primary health care interventions including implementation of an evidence based protocols or guideline for skin infections should be adopted in the Wellington sub-region to address this issue.

Prevention of Skin Infections in Community and Primary Health Care Settings

When working with families it is important to consider the resources currently available to the family or whanau to assist them in managing the situation. Inform the family of other supports and services available such as Work and Income, health and social agencies and extended family. (See Appendix D)

Health literacy is a barrier to understanding health issues therefore encourage the use of appropriate health and social services in the community to improve communication and health outcomes.

Consider different cultural practices and beliefs amongst families and whanau. However, it is important to take a full history of treatments tried, including complementary and traditional practices that may be compromising care.

Key messages for parents and caregivers:

Healthy Skin Messages

- Good food and nutrition is important for healthy skin
- Clean hands with soap and water often
- Cut and file fingernails
- Cover sores and cuts with plasters
- Keep skin clean
- Wear clean clothes
- Keep house clean inside and out
- Wash sheets and towels regularly
- Treat animals for fleas regularly.

Child with Minor Cut, Sores or Other Skin Conditions

- Wash hands with soap and water often
- Clean and cover cuts and sores with plasters
- Check cuts and sores on a daily basis
- Cut and file fingernails
- Care for other skin conditions e.g. eczema - use creams and lotions
- Use own sheets and towels
- If you need help, ask the nurse or other health worker.

See the doctor or nurse today if the sore or red area has any of the following:

- Is the size of a 10c piece or bigger
- Has pus
- Is getting bigger
- Has red streaks coming from it

- Is not getting better within 2 days
- Is near the eye.

Child with Skin Infection that is Getting Worse

- See the doctor or nurse. Medication (antibiotics) may be needed.
- Get medicine from the pharmacy straight away
- Take the full course of medicines (antibiotics) as prescribed
- Don't share medicines with others
- Supervise children taking medicine
- Go back to doctor if not getting better.

Child with Serious Skin Infection

- Your child will be sore and very sick
- Will need to go to hospital
- May need surgery.

Skin infections can lead to serious and life-threatening illness if left untreated.

The Healthy Skin Tool resource was developed for educational purposes for children's skin health. A useful tool for parents. (See Appendix A)

Assessment, Management and Treatment of Skin Infections

1. General Skin Infection Screening and Assessment

Skin infection Assessment Procedure

The health care professional must be competent to undertake a skin infection assessment. This includes, observing a skin examination being done and being observed undertaking one by a colleague who is experienced in skin examination.

Technique:

- Explain the procedure to the patient (and parent/caregiver if present)
- All health professional assessing and treating patients must use standard hygiene precautions i.e. use alcohol based hand sanitizer before and after assessing/treating patient; use gloves if patient has a discharging wound.

Assess for General Danger Signs:

- Lethargy
- Inability to drink
- Persistent vomiting
- Fever greater than 38°C
- Pain

Assess for Signs of Severe Skin Infection:

- Swelling or redness around the eyes
- Extensive warm redness and swelling

Assess For Underlying Risk Factors:

- Insect bites
- Cuts and lacerations

Assess for Diagnostic Signs and Symptoms:

Ask if the patient has:

- Skin itchiness (pruritis)?
- Pain from the skin infection?

Look for:

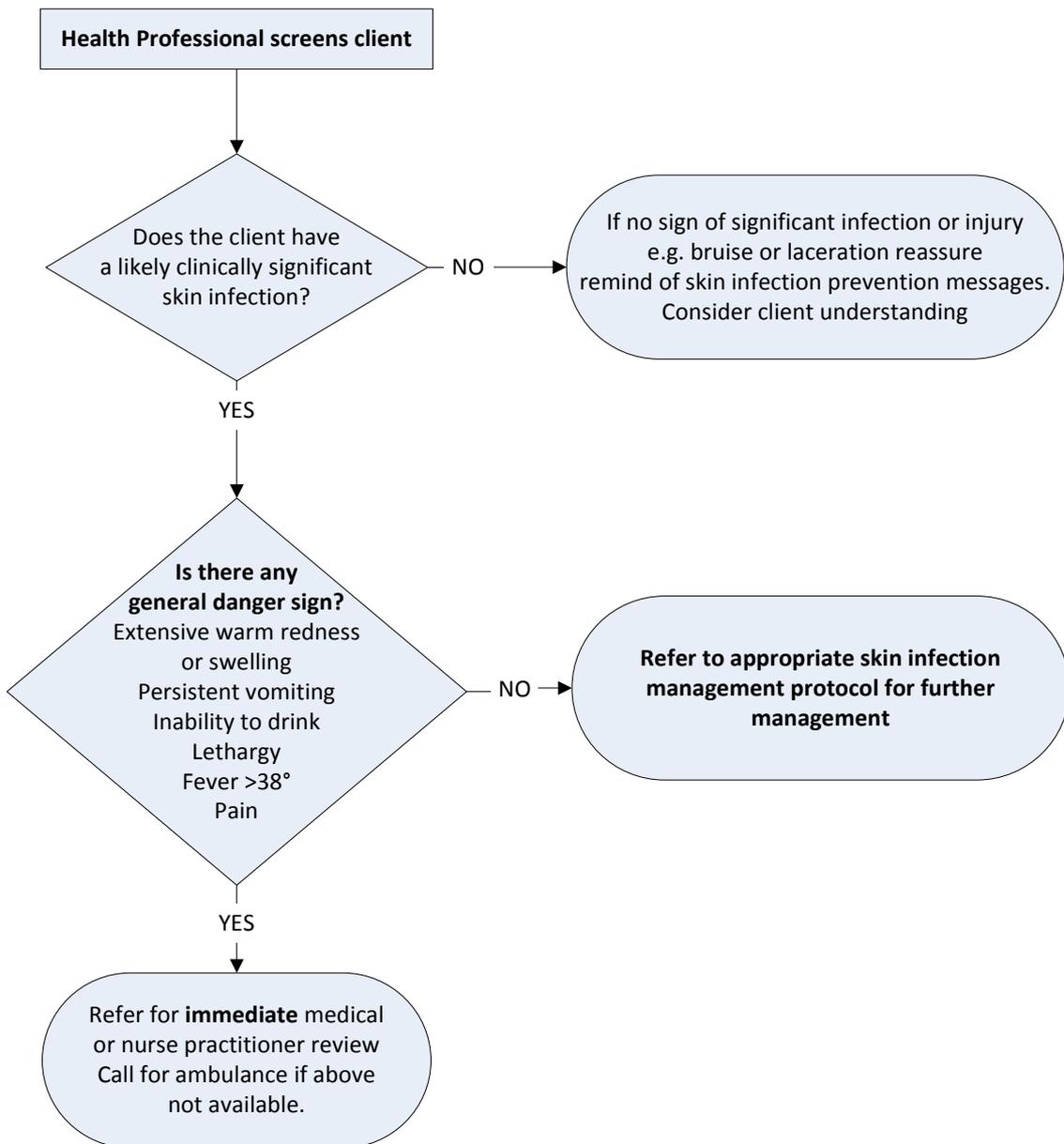
- Localised warm tender swelling or redness
- Discrete lesions with pus or crusts
- Papules on the hands, knees, elbows, feet, trunk
- Round or oval scaly patches
- If there are concerns about care and protection, health professionals are responsible to act on these concerns. Refer to organisational or practice policies.

Determine likely diagnosis and formulate action plan as per the table below:

Signs	Probable Condition	Action
Any general danger sign: Lethargy Persistent vomiting Inability to drink Extensive warm redness or swelling Fever greater than 38°C Pain	Very severe skin infection	Refer for immediate medical or nurse practitioner review Call for ambulance if above not available.
Swelling or redness around eyes	Consider periorbital or orbital cellulitis	Refer for medical/nurse practitioner review
Localised warm tender swelling and redness	Consider abscess or cellulitis	Refer cellulitis or boil guideline
Discrete sores/lesions with pus or crusts	Consider impetigo	Refer impetigo guidelines
Itchiness and papules	Consider scabies (Also insect bites, eczema, viral rash etc).	Refer scabies guidelines
Itchy skin with 3 or more of the following: <ul style="list-style-type: none"> • Visible flexural dermatitis involving the skin creases (or visible dermatitis on the cheeks and/or extensor areas of children aged 18 months or younger) • Personal history of flexural dermatitis (or dermatitis on the cheeks and/or extensor areas of children aged 18 months or younger) • Personal history of dry skin in the last 12 months • Personal history of asthma or allergic rhinitis (or history of atopic disease in a first degree relative of children if child under age 4 years) • Onset of signs and symptoms under the age of two years (do not use this criterion for children under the age of 4 years) 	Consider eczema	Refer to medical/nurse practitioner
Round or oval flat scaly patches, often itchy	Consider fungal infection	Refer to medical/nurse practitioner
Bite from a human or animal (mammal) Including injuries that occur to the fist as a result of contact with teeth	Consider human or animal bite (Be aware of non-accidental injury)	Refer to medical or nurse practitioner

Adapted from the Manual of Operations for a Registered Nurse-Led Primary School-Based, Primary Health Care Programme; Wiri Central Primary School, Manukau City, Counties Manukau DHB, 2011.

Algorithm: General Skin Infection Screening and Assessment



Adapted from the Manual of Operations for a Registered Nurse-Led Primary School-Based, Primary Health Care Programme; Wiri Central Primary School, Manukau City, Counties Manukau DHB, 2011.

2. Management and Treatment of Mild Skin Conditions (Insect Bites, Scabies and Head Lice)

2.1 Insect Bites

Non-venomous insect bites usually cause little more than an intense irritating itch (papular urticaria) for most people. The bite may show up as a small raised red spot. It may blister.

Unfortunately the urge to scratch usually results in an open sore that may become infected and take longer to heal.

The main treatment aim for insect bites is to prevent itching. Options include oral antihistamines, emollients and topical low potency topical steroid e.g. Hydrocortisone 0.5-1%, which is available over the counter.

Assess the home environment for stagnant water, long grass, accumulated rubbish etc, that may be contributing to the problem.

See <http://dermnetnz.org/arthropods/bites.html> for more information, including pictures.

2.2 Scabies

Scabies is an itchy rash caused by a little mite that burrows in the skin surface. The human scabies mite's scientific name is *Sarcoptes scabiei* var. *hominis*.

Scabies is nearly always acquired by skin-to-skin contact by someone else with scabies. Occasionally it is acquired by bedding or furnishings, as the mite can survive for a few days off its human host.

Signs and Symptoms

Itch

The itching appears a few days after infestation. It may occur within a few hours if the mite is caught a second time. The itch is characteristically more severe at night and affects the trunk and limbs. It does not usually affect the scalp.

Burrows

Scabies burrows appear as tiny grey irregular tracks between the fingers and on the wrists. They may also be found in armpits, buttocks, on the penis, insteps and backs of the heels. Microscopic examination of the contents of a burrow may reveal mites, eggs or mite faeces (scybala).

Generalised rash

Scabies rash appears as tiny red intensely itchy bumps on the limbs and trunk. It can easily be confused with dermatitis or hives (and may be accompanied by these). The rash of scabies is due to an allergy to the mites and their products and may take several weeks to develop after initial infestation.

Nodules

Itchy lumps or nodules in the armpits and groins or along the shaft of the penis are very suggestive of scabies. Nodules may persist for several weeks or longer after successful eradication of living mites.

Acropustulosis

Blisters and pustules on the palms and soles are characteristic of scabies in infants.

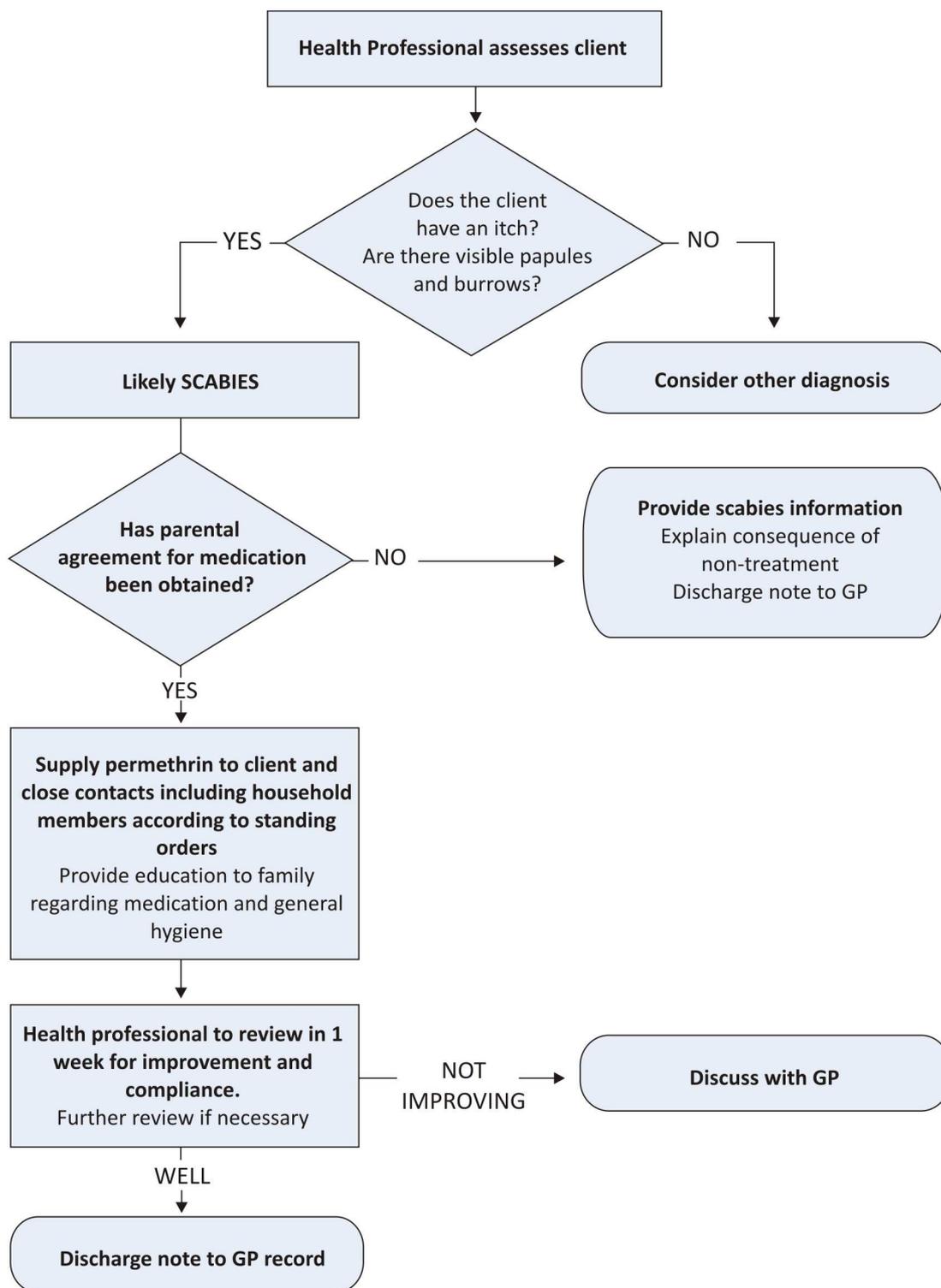
Secondary infection

Impetigo commonly complicates scabies and results in crusting patches and scratched pustules. Cellulitis may also occur, resulting in localised painful swelling and redness, associated with fever.

Crusted scabies (also called 'Norwegian scabies') is a very contagious variant of scabies in which there are thousands or even millions of mites, but very little itch. The patient presents with a generalised scaly rash. It is frequently misdiagnosed as psoriasis. Unlike the usual form of scabies, crusted scabies may affect the scalp. Refer to dermatologist.

See <http://www.dermnetnz.org/arthropods/scabies.html> for more information, including pictures.

Algorithm: Scabies Management



Adapted from the Manual of Operations for a Registered Nurse-Led Primary School-Based, Primary Health Care Programme; Wiri Central Primary School, Manukau City, Counties Manukau DHB, 2011.

Treatment

Scabicides are chemical insecticides used to treat scabies. Those available in New Zealand include:

- 5% Permethrin cream, left on for 8-10 hours (preferred)
- 0.5% Aqueous malathion lotion, left on for 24 hours.

Gamma benzene hexachloride cream is no longer recommended because of resistance and potential toxicity. Sulphur and crotamiton were popular in the past but are relatively weak scabicides.

The scabicide has to be applied before bed to the whole body from chin to soles. The scalp and face also need to be treated for children under 2 years, those confined to bed, and some others with reduced resistance.

Ensure all close contacts are treated, especially household contacts, at the same time. A second treatment will be required for all household members a week later if:

- The scabies infection is severe or chronic
- If any family member develops any new papules or burrows following the first treatment.

Treatment should not be repeated more than two times without medical advice. Overuse of insecticides will irritate the skin.

Each treatment with scabicide should be followed the next morning by hot-wash laundering or dry cleaning of sheets, pillow cases, towels and any clothes worn against the skin over the last week. All household members need to shower or bath the day after their treatment. Non washable items e.g. footwear, toys, should be sealed in a plastic bag and stored above 20°C for one week. Alternatively they can be frozen below -20°C for 12 hours. Rooms should be thoroughly cleaned with normal household products. Fumigation or specialised cleaning is not required. Carpeted floors and upholstered furniture should be vacuumed and all areas cleaned with normal household products. The vacuum bag should then be discarded and furniture covered by plastic or a sheet during treatment and for 7 days after. (See Appendix D)

To reduce the risk of the treatment failing:

- Ensure the scabicide is applied to the whole body from the chin down
- Leave it on for the recommended time and reapply it after washing
- Apply the scabicide under fingernails using a soft brush
- If there is crusting, secondary infection or non-response to standard treatment then medical review is required
- Antibiotics may be indicated if there is crusting or secondary infection
- Ensure all close contacts are treated whether or not they are itchy

Topical Permethrin Lotion 5%

Indications for use:

- Scabies

The medicine should be supplied or administered in accordance with the Scabies management protocol.

Children aged 6 months to 2 years:

- Prescribe or supply one 30ml bottle of permethrin lotion 5%
- Advise the caregiver to apply permethrin lotion to the child's entire skin surface from the neck down at bedtime and to wash it off the next morning (it is recommended that the lotion be left on for 8 to 14 hours). Children under 2 years of age should also have a thin film of lotion applied to the scalp, face and ears, avoiding the eyes and mouth. Application to the genital area and the skin just under the fingernails is especially important. Reapply the lotion to any area of skin which is washed during the 8 hours following application. If hands or any other parts must be washed during this period, the treatment must be re-applied to those areas immediately
- For children aged less than one year use 1/8 or 4mls of the bottle, and for 1 to 2 year olds use up to a quarter of a bottle
- Follow-up in 2 weeks and if symptoms persist consider reapplication.

Children aged 2 years and over:

- Prescribe or supply one 30ml bottle of permethrin lotion 5%
- Advise the caregiver to apply permethrin lotion to the child's entire skin surface from the neck down at bedtime and to wash it off the next morning (it is recommended to that the lotion be left on for 8 to 14 hours). Application to the genital area and the skin just under the fingernails is especially important. Do not wash or bathe for 8 hours. Reapply the lotion to any area of skin which is washed during the 8 hours following application. If hands or any other parts must be washed during this period, the treatment must be re-applied to those areas immediately
- For children age 2-5 years use ¼ or 8mls of the bottle and for children 5-12 years use ½ or 15mls of the bottle
- Follow-up in 7 – 10 days. Reapply lotion if symptoms persist.

Adults:

- Prescribe or supply one 30ml bottle of permethrin lotion 5%
- Advise the adult to apply permethrin lotion to their entire skin surface from the neck down at bedtime and to wash it off the next morning (it is recommended to that the lotion be left on for 8 to 14 hours). Application to the genital area and the skin just under the fingernails is especially important. Do not wash or bathe for 8 hours. Reapply the lotion to any area of skin which is washed during the 8 hours following application. If hands or any other parts must be washed during this period, the treatment must be re-applied to those areas immediately
- Follow-up in 7 – 10 days. Reapply lotion if symptoms persist.

Contraindications:

- Check allergy status first. Do not use if known hypersensitivity to permethrin, synthetic pyrethroids or pyrethrin
- Not to be used on infants less than 2 months old. Refer to paediatrician if required
- Not to be used during pregnancy or breastfeeding.

Precautions:

- Avoid contact with the eyes
- Avoid contact with open wounds or cuts
- Permethrin lotion is for external use only and should be kept out of reach of children
- Adults aged over 70 years
- May exacerbate pruritus, oedema and erythema.

Side Effects:

- The most common are: mild transient burning or stinging, temporary redness of the skin
- The skin may become much itchier for several days after application
- For a comprehensive list of rare side effects consult the medication data sheet in Appendix E.

Additional Information:

As a standard practice all persons given permethrin should be told about the medication, its side effects, contraindications, and interactions with other medicines

Refer to this table for children and adult doses for Topical Permethrin

Children	6months to 1year	1/8 or 4ml of 30ml bottle (1teaspoon approximately) Topical Permethrin Lotion 5%
	1-5years	¼ or 8ml of 30ml bottle Topical Permethrin Lotion 5%
	5-12 years	½ or 15ml of 30ml bottle Topical Permethrin Lotion 5%
Adults		1 bottle of 30mls Topical Permethrin Lotion 5%

Source: <http://dermnetnz.org/arthropods/scabies.html>

2.3 Head Lice

Head lice are a common problem all over the world. They are small flat insects about 2-3mm long that like to live on the human scalp where they feed on human blood and lay their eggs or nits.

Head lice usually cause an itch and irritation of the scalp. It is important to identify the lice to make the correct diagnosis. Head lice can be seen moving from hair to hair. Unhatched eggs (nits) are grey and can be seen within a few mm of the scalp. It is easier to identify and remove the live lice and eggs by wet combing using a lice comb compared to visual inspection alone. Any eggs (nits) more than 1 cm from the scalp will have hatched and died and can just be removed with a comb. After hatching, the nits (empty egg cases) are white.

Scratching can cause crusting and scaling on the scalp. Occasionally secondary bacterial infection of the scalp results in small sores on the scalp with tender glands in the neck. Dermatitis can also occur with a heavy infestation of lice. Fortunately head lice are not known to carry any diseases which can affect humans.

Prevention

Brush hair twice a day to discourage head lice. Brush hair from front to back, back to front, from right ear to left and left ear to right, doing this ten times each. Don't share hats, brushes, combs or hair ties. Wear long hair tied back. Community-wide or school-based education programmes informing parents of methods to eradicate lice, and community health teams in schools, are the most effective ways to keep infestation rates down.

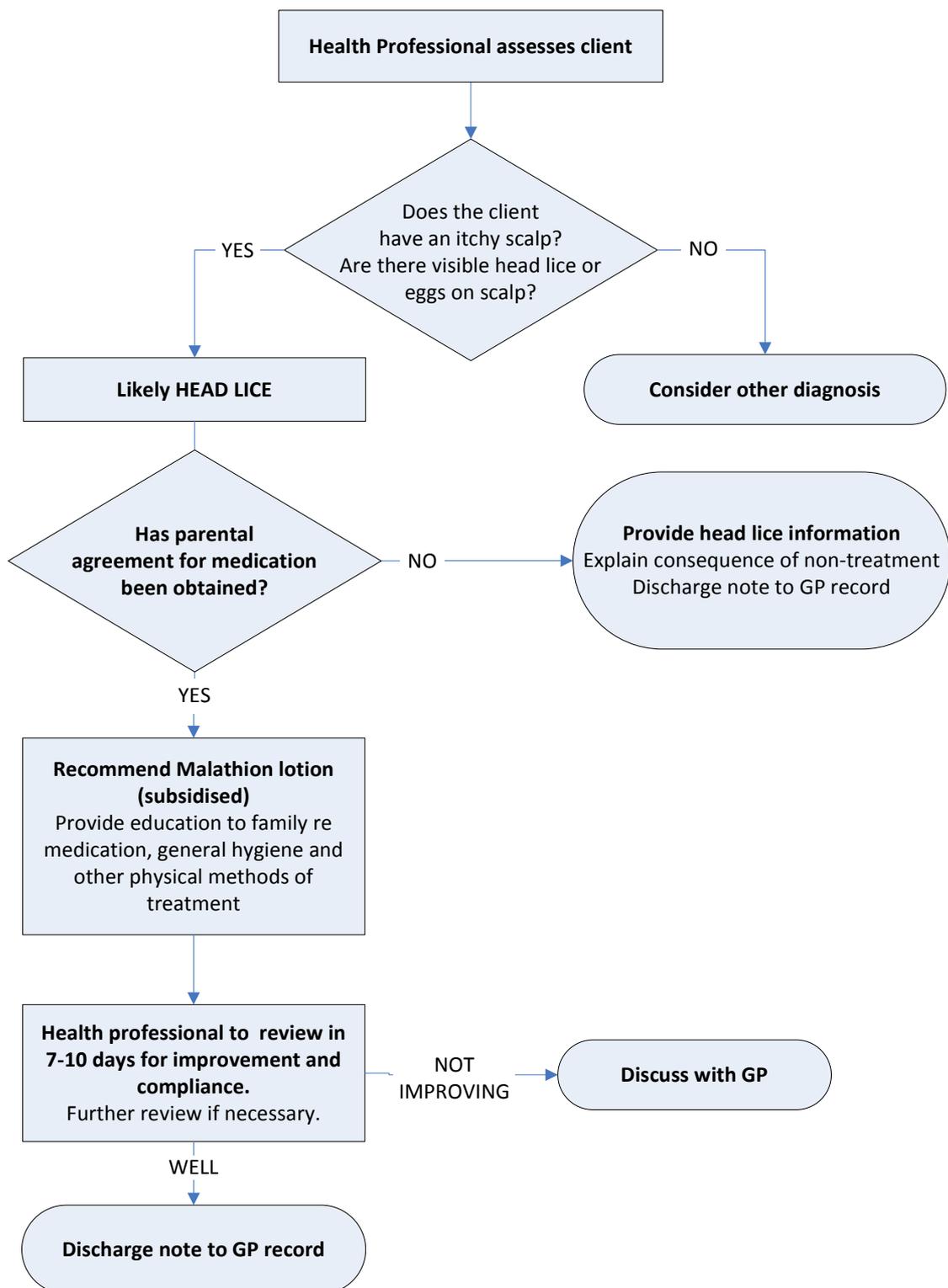
Treatment

Treatment of head lice usually consists of **chemical treatments** (pesticides) and/or **physical methods** (combs). Wet combing to physically remove the lice and nits may be effective when done properly.

Important points for families to remember when treating head lice:

- Regularly examine the children's scalps. Look for lice and eggs (nits) close to the skin, behind and above the ears and on the back of the neck
- Treat other members of the household at the same time if lice found
- Not all eggs (nits) are killed with one application of insecticide, therefore a second application is recommended 7 days later
- The lice may not be killed immediately and may take a day or so to die
- The presence of nits doesn't mean ACTIVE infection. Hatched nits (empty egg shells) will remain attached to the hair shaft until the hair grows out, unless they are actively removed or the hair is cut
- Machine wash in hot water all bed linens, clothes, and towels used in the last 24 hours
- Items that can't be washed such as soft toys and helmets should be placed in airtight plastic bags for two weeks
- Vacuum pillows
- Wash hairbrushes and combs
- Check for irritation or crusting of the scalp. Refer to GP to exclude secondary infection if there is inflammation or crusting.

Algorithm: Head lice management



Adapted from the Manual of Operations for a Registered Nurse-Led Primary School-Based, Primary Health Care Programme; Wiri Central Primary School, Manukau City, Counties Manukau DHB, 2011.

Physical methods of management

Physical methods of removing nits and lice, often a neglected part of treatment, can be effective on their own. They are however more reliable used in conjunction with insecticide treatments.

Eggs are cemented strongly to the hair shaft and simple washing usually doesn't remove them. Nit combs are the most effective way of physically removing the nits. They are available from chemists, pet stores or can be purchased over the internet. Metal combs are much more effective than plastic. Electrical combs designed to 'zap' lice on the hair shaft are not effective.

- Using a nit comb is easiest when the hair is wet. Combing may be easier if a conditioner is applied first. It is best done after treating with insecticides
- Use a good light
- Work through the hair in sections and comb down the hair shaft towards the scalp to try and remove the stubborn nits
- It may be easier if this is done while the child is kept occupied (for example watching television)
- Repeat the combing at least twice more on consecutive nights if possible and then weekly

Cutting the hair short (i.e. No. 1 cut) may be useful in difficult cases. This makes searching and removing lice easier but won't prevent reinfestation.

Chemical Treatment

In New Zealand insecticides available to treat head lice include:

- Organophosphates such as **Malathion** (preferred and subsidised by Pharmac)
- A-Lices® Scalp and Body Hygiene Shampoo
- Derbac-M® Liquid
- Pyrethrum / pyrethrin / Phenothrin
- Synthetic pyrethroids (permethrin).

Lotions, liquids or cream are preferred to shampoo. All are topical applications; therefore they are applied directly to the scalp. Even so, a small portion may be absorbed into the body and for this reason it is important to follow the manufacturer's advice on how long to use it and how often to repeat the treatment.

Malathion Lotion 0.5% (w/v) (A-Lices Lotion)

Indications for use:

- For the treatment and eradication of head lice and eggs.

Charting and administration:

The medicine should be supplied or administered in accordance with the Head Lice management protocol.

- If one member of a household requires treatment with Malathion lotion, it is necessary to treat the whole household.

Adults, Children 6 months of age and above:

- Supply one 200ml bottle of Malathion lotion 0.5%
- Apply to dry hair. Advise the caregiver to rub the liquid gently into the scalp until all hair and scalp is thoroughly moistened. Pay particular attention to the partings, back of the neck, fringes and around the ears. Leave the hair to dry naturally in a warm but well ventilated room
- After 12 hours, or the next day if preferred, shampoo the hair in the normal way. Rinse the hair and comb whilst wet to remove dead lice and eggs (nits)
- Do not use conditioner or dry with a hair dryer either after application of the lotion or after washing the lotion off
- Reapply 5-10 days after the first application.

Contraindications:

- Check allergy status first. Do not give if known hypersensitivity to Malathion or other organophosphates
- Do not use on infants less than 6 months old.

Precautions:

- Avoid contact with the eyes
- It is advisable that nursing staff in regular contact with this product should wear protective gloves when carrying out treatment
- Malathion lotion is for external use only and should be kept out of reach of children
- Continued prolonged treatment with Malathion lotion should be avoided
- Do not use for more than 3 consecutive weeks
- This treatment may affect permed, coloured or bleached hair
- Adults aged over 70 years
- May exacerbate pruritus, oedema, and erythema
- Pregnancy or breastfeeding.

Side Effects:

Very rarely, skin irritation has been reported. For a comprehensive list of rare side effects consult the medication data sheet. (See Appendix F)

Source: <http://dermnetnz.org/arthropods/headlice.html>

Additional Information:

As a standard practice all persons given Malathion should be told about the medication, its side effects, contraindications, and interactions with other medicines.

3. Management and Treatment of Bacterial Skin Infections (Impetigo, Cellulitis, Boils and Human and Animal Bites)

3.1 Impetigo

Impetigo is a bacterial skin infection. It is often called school sores because it most often affects children. It is quite contagious.

Streptococcus pyogenes and/or *Staphylococcus aureus* are the micro-organisms responsible for impetigo.

Impetigo may be caught from someone else with impetigo or boils, or appear 'out of the blue'. It often starts at the site of a minor skin injury such as a graze, an insect bite, or scratched eczema.

Signs and Symptoms

Impetigo presents with pustules and round, oozing patches which grow larger day by day. There may be clear blisters (bullous impetigo) or golden yellow crusts.

See <http://dermnetnz.org/bacterial/impetigo.html> for more information including pictures.

Management of Impetigo:

- Consider swab of moist lesion if high risk of recurrence or complicating features (living in areas of deprivation or previous infections, antibiotic resistance)
- Localised staphylococcal infections may be managed using meticulous wound care and antiseptics for local application and cleanser
- The routine use of topical antibiotics such as fusidic acid or mupirocin is undesirable because of increasing prevalence of topical antibiotic-specific and methicillin-resistant strains of staphylococci
- Some families may find adding Janola bleach to bathwater useful for reducing the bacterial load on the skin, 5ml Janola per 5L of water twice a week. This is approximately 100mls or 1/3 cup for a 15cm deep full sized bath. Use 1 capful for baby's baths.¹ Care should be taken to clarify measurement with a 'bottle cap' so as not to be misunderstood as a 'cupful'. **Bleach should never be used directly on the skin**
- An unsubsidised alternative to bleach which has the advantage of being moisturising is Oilatum Plus®. Use 4 - 8 capfuls in an 8inch bath.
- If indicated apply topical antiseptic after soaking or bath e.g. this would be for children with just localised impetigo (small lesions only)
- Keep affected areas covered with a breathable dressing preferably a fabric plaster or gauze
- Stay away from school for 24 hours after treatment initiated
- Review common prevention messages with child and family
- Moderate impetigo or multiple lesions will require treatment with oral antibiotics.

¹ www.adhb.govt.nz/starshipclinicalguidelines/Cellulitis.html accessed August, 2012

Indications for Antibiotic Therapy:

Mild or localised impetigo (same size or smaller than the size of a 10c coin) a trial of meticulous wound care and antiseptics for local application and cleanser for 2-3 days. If impetigo lesions are not resolving or worsening, oral antibiotics should be prescribed.

Moderate impetigo (lesions larger than 10c coin or multiple lesions) the child should be prescribed oral antibiotics for 7-10 days:

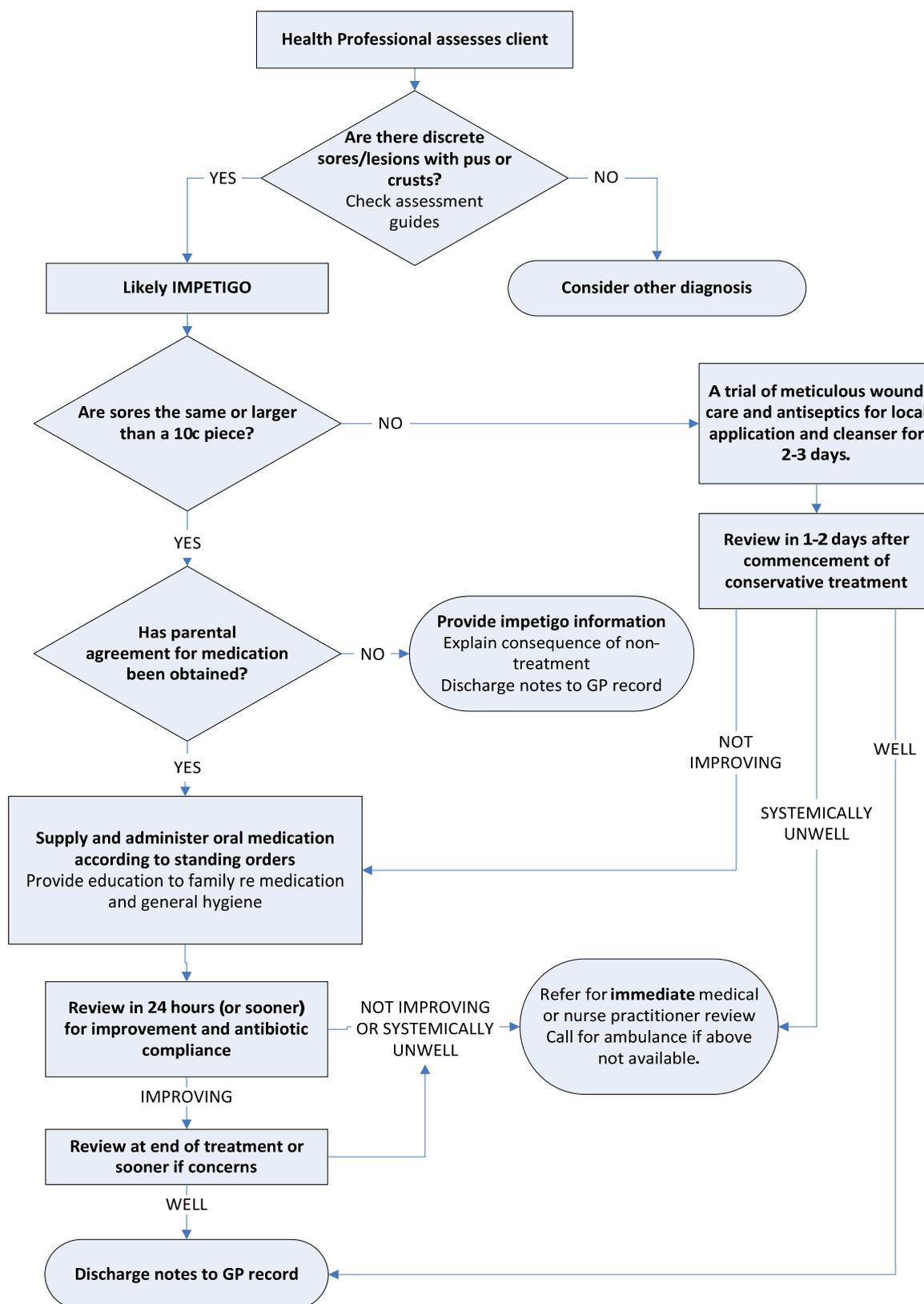
- Cephalexin if NO allergy/contraindication to cephalosporins /penicillins and unable to swallow capsules (**cephalexin is now subsidised**)
- Flucloxacillin if NO allergy/contraindication to cephalosporins/penicillins and able to swallow capsules
- Erythromycin if YES to allergy to cephalosporins/penicillins and no allergy/contraindication to erythromycin
- Co-trimoxazole is used in Methicillin resistant staphylococcus aureus (MRSA) but needs to be in consultation with the GP.

Sources: <http://dermnetnz.org/bacterial/impetigo.html>

<http://www.bpac.org.nz/magazine/2009/february/impetigo.asp#key>

Arrange review of child on antibiotics within 24 hours or sooner if not improving.
Any child who is systemically unwell needs a medical review.

Algorithm: Impetigo Management



Adapted from the Manual of Operations for a Registered Nurse-Led Primary School-Based, Primary Health Care Programme; Wiri Central Primary School, Manukau City, Counties Manukau DHB, 2011.

3.2 Cellulitis

Cellulitis is a common bacterial infection of the skin, which can affect all ages. It usually affects a limb but can occur anywhere on the body. Symptoms and signs are usually localised to the affected area and include warmth, redness, tenderness and swelling. The most common pathogens are *Staphylococcus aureus*, *Staphylococcus pyogenes* and Group C or Group G streptococci.

If the cellulitis is:

- periorbital or orbital OR
- circumferential around a limb OR
- located over a joint OR
- located on the hand or foot OR
- appears to be an abscess - localised, painful, hot swelling (see boils section)
- caused by a human or animal bite (see next section)
- is the same size or larger than a 10c coin (1.5 - 2 cms in diameter)
- tracking – lines of redness (erythema) proximal to the main lesion

OR

- if the child is under 1 year of age
- if the child is significantly unwell (with fever $>38^{\circ}\text{C}$, chills and shakes, persistent vomiting, lethargy, inability to drink).

A medical review is urgently needed as the child may need admission to hospital.

Severe or rapidly progressive cellulitis may lead to septicaemia (blood poisoning), bone or joint infections or endocarditis (heart valve infection) or necrotising fasciitis, a more serious soft tissue infection that is more common in adults.

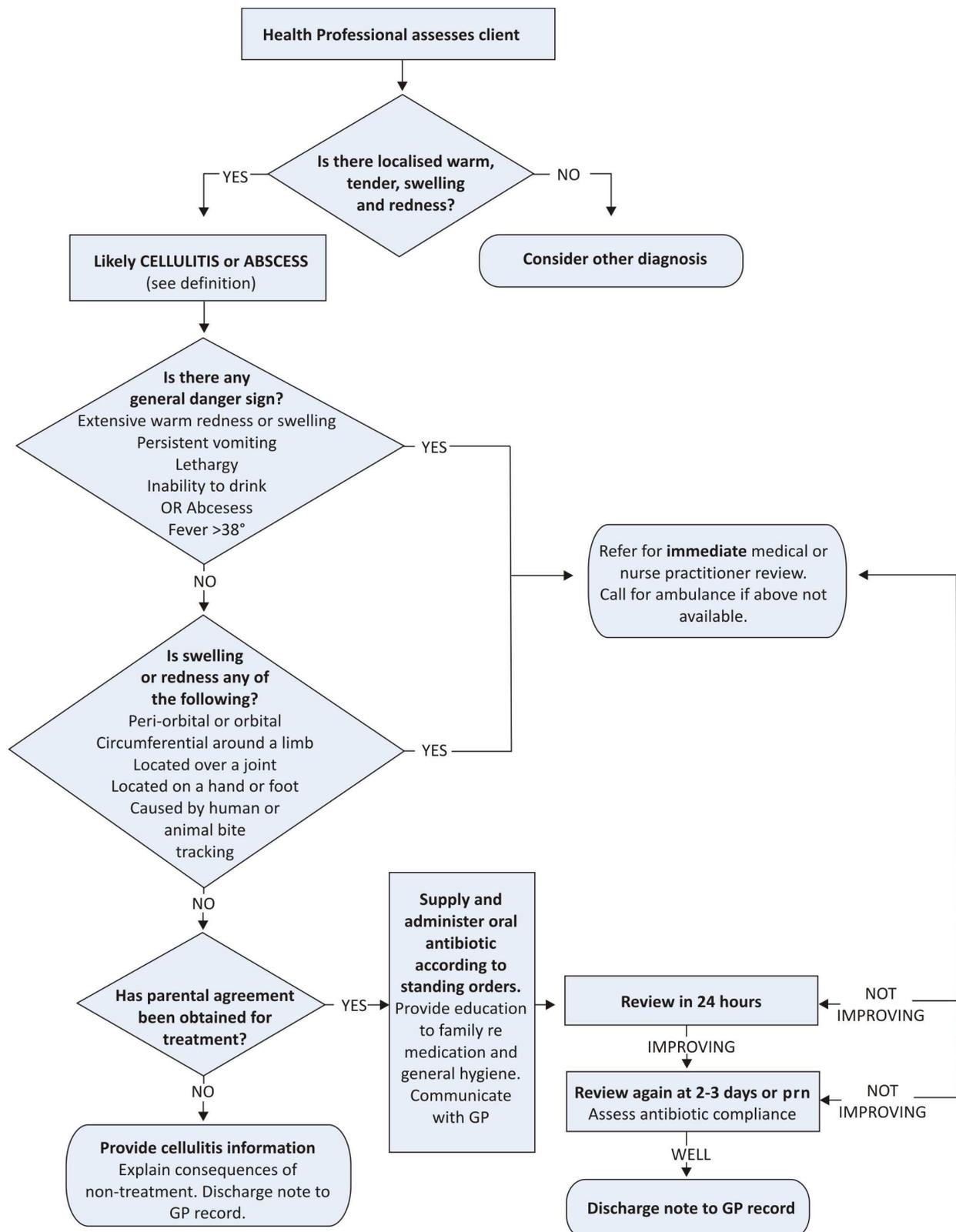
Management

- Antibiotic treatment is indicated
- Keep affected area elevated and assess response to treatment. May require referral to hospital if severe
- For periorbital cellulitis, in all but very mild cases, refer to hospital
- Consider swab of moist lesion if high risk of recurrence or complicating features such as antibiotic resistance or MRSA
- Consider nasal swab to identify MRSA, for recurrent cellulitis or where cellulitis is not improving on standard treatment and there is no exudate (Liu, Bayer, Cosgrove, et al., 2011)
- Review common prevention messages with child and family.

Source:

<http://www.bpac.org.nz/magazine/2010/november/infectious.asp?section=4#cellulitis>

Algorithm: Cellulitis and Boils Management



Adapted from the Manual of Operations for a Registered Nurse-Led Primary School-Based, Primary Health Care Programme; Wiri Central Primary School, Manukau City, Counties Manukau DHB, 2011.

Antibiotic Therapy

- Cephalexin if NO allergy/contraindication to cephalosporins/penicillins and unable to swallow capsules
- Flucloxacillin if NO allergy/contraindication to cephalosporins/penicillins and able to swallow capsules
- Erythromycin if YES to allergy to cephalosporins/penicillins and no allergy/contraindication to erythromycin
- Co-trimoxazole is used in Methicillin resistant staphylococcus aureus (MRSA) but needs to be in consultation with the GP.

Arrange review of child on antibiotics within 24 hours or sooner if not improving.

Any child who is systemically unwell needs a medical review.

3.3 Boils (Furuncles)

Boils (furuncles) are a deep infection of the hair follicles and present as one or more tender red spots, lumps or pustules. Common pathogen responsible is *Staphylococcus aureus*.

Careful inspection reveals that the boil is centred on a hair follicle. A boil is a deep form of bacterial folliculitis; superficial folliculitis is sometimes present at the same time.

Staphylococcus aureus can be cultured from skin lesions.

If there are multiple heads, the lesion is called a 'carbuncle'. Large boils form abscesses, defined as an accumulation of pus within a cavity. Cellulitis may also occur, i.e. infection of the surrounding tissues, and this may cause fever and illness.

See <http://dermnetnz.org/bacterial/boils.html> for more information, including pictures

Management

- Swab of at least one moist lesion
- Localised staphylococcal infections may be managed using meticulous wound care (including incision and drainage of large furuncles and abscesses) and antiseptics as local application and cleanser
- The routine use of topical antibiotics such as fusidic acid or mupirocin is undesirable because of increasing prevalence of topical antibiotic-specific and methicillin-resistant strains of staphylococci
- Antibiotics may be considered if there is fever, surrounding cellulitis or co-morbidity e.g. eczema or if the lesion is in a site associated with complications e.g. face
- Review common prevention messages with child and their family.

Recurrent Boils

- Consider staphylococcal decolonisation with a one week course of intranasal mupirocin or fusidic acid
- Consider other household contacts
- The patient should be advised to shower daily using antiseptic body wash, as well as hot laundering of bed linen and towels
- Consider recurrent skin infection prevention guidelines (See Appendix C)

Consider MRSA if there is a lack of response to first line antibiotics (Flucloxacillin or Cephalexin).

Antibiotic Therapy

- Cephalexin if NO allergy/contraindication to cephalosporins/penicillins and unable to swallow capsules
- Flucloxacillin if NO allergy/contraindication to cephalosporins/penicillins and able to swallow capsules
- Erythromycin if YES to allergy to cephalosporins/penicillins and no allergy/contraindication to erythromycin
- Co-trimoxazole is used in MRSA but needs to be in consultation with the GP.

Source: http://www.bpac.org.nz/resources/handbook/antibiotics/antibiotics_guide.asp

Arrange review of child on antibiotics within 24 hours or sooner if not improving.

Any child who is systemically unwell needs a medical review.

3.4 Human and Animal (Mammalian) Bites

- Should be reviewed by a doctor
- All infected bites should be treated with antibiotics
- Prophylactic treatment with antibiotics is appropriate for:
 - Human and cat bites (even if they do not appear to be infected)
 - Injuries that occur to the fist as a result of contact with teeth are essentially treated the same as for bites
 - Any bites that occur to the hand, foot, face, tendon or ligament
 - Immunocompromised children
- Consider referral to secondary care for any bites that involve the bones or joints.

Management

- Clean and debride wound thoroughly and start course of oral antibiotics
- Assess patient's need for tetanus immunisation
- Consider referral if bone or joint involvement.

Common pathogens Polymicrobial infection, Pasteurella multocida, Capnocytophaga canimorsus (cat and dog bites), Eikenella corrodens (fist injury), S. aureus, streptococci and anaerobes

Antibiotic Therapy

First choice Amoxicillin/clavulanic acid

- If NO allergy or contraindication to cephalosporins and penicillins
- See prescribing guidelines.

Alternatives: Metronidazole plus co-trimoxazole.

Source: http://www.bpac.org.nz/resources/handbook/antibiotics/antibiotics_guide.asp

4. Antibiotics for Bacterial Skin Infections

Oral Cephalexin Monohydrate:

Indications for use:

- Moderate impetigo or mild impetigo lesions that have not responded to conservative treatment (see algorithm, p. 24)
- Uncomplicated cellulitis
- Boils with complicating features
- Cephalexin preferred for children unable to take tablets due to increased compliance and palatability compared with flucloxacillin.

Charting and administration:

- The medicine should be supplied or administered in accordance with the relevant management protocol.
- The paediatric pharmacopoeia dose for cephalexin is 12.5mg/kg/dose 6 hourly to a maximum of 500mg 6 hourly

Children > 30kg

- 500mg twice a day for 7 to 10 days
- If child can swallow capsules use 500mg capsules, One twice a day for 7 to 10 days
- If child cannot swallow capsules use **250mg/5ml** oral suspension, 10ml twice a day for 7 to 10 days
- The suspension must be kept refrigerated following reconstitution.

Children 20kg - 30kg

- Use **250mg/5mls** oral suspension, 5mls twice a day for 7 to 10 days
- The suspension must be kept refrigerated following reconstitution.

Children 10kg -20kg

- Use **125mg/5mls** oral suspension, 5mls twice a day for 7 to 10 days
- The suspension must be kept refrigerated following reconstitution.

Children under 1yr or <10kg

- Needs review by medical or nurse practitioner.

Contraindications:

- Check allergy status first. Do not give if previous hypersensitivity to cephalosporin antibiotics or previous major allergy to penicillin.

Precautions:

- History of gastrointestinal disease, particularly colitis
- Impaired renal function
- Currently taking probenecid, metformin, oral anticoagulants may reduce the effect of oral contraceptives

- Avoid prolonged use.

Warning:

- Pseudomembranous colitis has been reported with use of cefalexin monohydrate and must be considered in any patient who develops diarrhoea
- Stevens-Johnson syndrome, erythema multiform or toxic epidermal necrolysis may occur rarely.

Side Effects:

- The most common side effects are: Gastrointestinal (diarrhoea, nausea, vomiting, dyspepsia, abdominal pain) or Hypersensitivity (rash, urticaria, angioedema)
- Other: itchiness, vaginitis, dizziness, fatigue, headache, agitation, confusion, hallucinations, arthralgia, arthritis, joint disorders
- For a comprehensive list of rare side effects consult the medication data sheet in Appendix F.

Additional Information:

As a standard practice all persons given cefalexin monohydrate should be told about the medication, its side effects, contraindications, and interactions with other medicines.

Oral Flucloxacillin:**Indications for use:**

- Moderate impetigo or mild impetigo lesions that have not responded to conservative treatment
- Uncomplicated cellulitis
- Boils with complicating features

AND

- Child is able to take capsules.

Charting and administration:

- The medicine should be supplied or administered in accordance with the impetigo management protocol.
- The paediatric pharmacopoeia dose for flucloxacillin is
 - Usual 12.5mg/kg/dose 6 hourly
 - Severe infection 25mg/kg/dose 6 hourly to a maximum of 500 mg 6 hourly

Children 30kg and over who can swallow capsules:

- One 500mg capsule three times a day for 7-10 days
- Each dose should be taken on an empty stomach if possible, either one hour before or two hours after food.

Contraindications:

- Check allergy status first. Do not give if allergic to penicillins (including flucloxacillin or amoxicillin) or cephalosporin antibiotics such as cephalixin

- Flucloxacillin is contraindicated in patients with a previous history of flucloxacillin-associated jaundice/hepatic dysfunction.

Precautions:

- May reduce the effectiveness of oral contraceptives
- Impaired liver or kidney function
- Currently taking probenecid.

Side Effects:

- If any hypersensitivity reaction occurs, the treatment should be discontinued
- Minor gastrointestinal disturbances may occur during treatment
- Pseudomembranous colitis, hepatitis and cholestatic jaundice have been reported
- Interstitial nephritis, neutropenia (including agranulocytosis) and thrombocytopenia may occur but are reversible when treatment is discontinued.

Additional Information:

As a standard practice all persons given flucloxacillin should be told about the medication, its side effects, contraindications, and interactions with other medicines.

Oral Erythromycin Ethyl Succinate:

Indications for use:

- Moderate impetigo or mild impetigo lesions that have not responded to conservative treatment
- Uncomplicated cellulitis
- Boils with complicating features

AND

- Allergy to penicillin or cephalosporin antibiotics present.

Charting and administration:

- The medicine should be supplied or administered in accordance with the impetigo management protocol.
- The paediatric pharmacopoeia dose for erythromycin is 12.5mg/kg/dose 6 hourly to a maximum of 750mg 6 hourly

Children >40kg

- 1.6g per day in 2 to 4 divided doses for 7-10 days
- Use **400mg/5mls** oral suspension or **400mg** tablets (if child is able to take tablets)
- Suspension requires refrigeration following reconstitution.

Children 10- 40kg

- 40mg/kg per day in 2 to 4 divided doses (max 1.6g per day) for 7-10 days
- Use 200mg/5mls or 400mg/5mls oral suspension
- Suspension requires refrigeration following reconstitution.

Children under 1yr or <10kg

- Needs review by medical or nurse practitioner.

Contraindications:

- Check allergy status first. Do not give if previous hypersensitivity to erythromycin ethyl succinate or other erythromycin salts
- Impaired liver function
- Currently taking terfenadine, astemizole, pimozone and ergotamine or dihydroergotamine.

Precautions:

- May interact with antiepileptics and warfarin.

Side Effects:

- The most common side effects are: nausea, vomiting, diarrhoea, abdominal pain, anorexia
- For a comprehensive list of rare side effects consult the medication data sheet in Appendix E.

Additional Information:

As a standard practice all persons given erythromycin ethyl succinate should be told about the medication, its side effects, contraindications, and interactions with other medicines.

Oral Amoxicillin/clavulanic acid

Indications for use:

- Infected animal (mammalian) bites
- All human, cat and high risk animal (mammalian) bites.

Charting and administration:

- The medicine should be supplied or administered in accordance with the Human and Animal (mammalian) bites management protocol.
- The paediatric pharmacopoeia dose for amoxicillin/clavulanic acid is 15mg/kg 8 hourly to a maximum of 500mg 8 hourly

Adults and Children over 12 years of age:

- Use one 500/125mg strength tablet, three times daily, for 7-10 days
- To minimise any possible gastrointestinal intolerance, administer at the start of a meal, when the absorption is optimal
- Duration of treatment should not exceed 14 days without review.

Children 7-12 years:

- Use 250/5mls oral suspension. Each 5mls contains amoxicillin trihydrate equivalent to 250mg amoxicillin and potassium clavulanate equivalent to 62.5mg clavulanic acid
- Use 5ml of Amoxicillin/Clavulanic Acid 250/62.5 suspension three times daily for 7-10 days. For severe infections this may be increased to 10mls of Amoxicillin/Clavulanic Acid 250/62.5 suspension three times a day
- Suspension requires refrigeration following reconstitution.

Children 2-6 years:

- Use 125/5mls oral suspension. Each 5mls contains amoxicillin trihydrate equivalent to 125mg amoxicillin and potassium clavulanate equivalent to 31.25mg clavulanic acid
- Use 5mls Amoxicillin/Clavulanic Acid 125/31.25 suspension three times a day for 7-10 days. For severe infections this may be increased to 10mls of Amoxicillin/Clavulanic Acid 125/31.25 suspension three times a day
- Suspension requires refrigeration following reconstitution.

Children under 2yrs

- Needs review by medical practitioner.

Contraindications:

- Check allergy status first. Do not give if allergic to penicillins (including flucloxacillin or amoxicillin) or cephalosporin antibiotics such as cephalexin
- Amoxicillin/Clavulanic Acid is contraindicated in patients with a previous history of amoxicillin or amoxicillin/clavulanic acid -associated jaundice/hepatic dysfunction
- Currently taking terfenadine, astemizole, pimozone and ergotamine or dihydroergotamine.

Precautions:

- May reduce the effectiveness of oral contraceptives²
- Impaired liver or kidney function
- Currently taking probenecid
- Suspected infectious mononucleosis
- Pregnancy and breastfeeding

Note: Recommendations are based on Medsafe approved indications where appropriate.

Side Effects:

- If any hypersensitivity reaction occurs, discontinue treatment
- Minor gastrointestinal disturbances may occur during treatment
- Superinfection including candidiasis
- Drug rash with eosinophilia and systemic symptoms (DRESS), to discontinue promptly
- Pseudomembranous colitis, hepatitis and cholestatic jaundice have been reported
- Interstitial nephritis, neutropenia (including agranulocytosis) and thrombocytopenia may occur but are reversible when treatment is discontinued.
- For a comprehensive list of rare side effects consult the medication data sheet in Appendix F

Additional Information:

As a standard practice all persons given amoxicillin/clavulanic acid should be told about the medication, its side effects, contraindications, and interactions with other medicines.

² Latest recommendations are that no additional contraceptive precautions are required when *combined* oral contraceptives are used with antibacterials that do not induce liver enzymes, unless diarrhoea or vomiting occur. These recommendations should be discussed with the woman, who should be advised that guidance in written patient information may differ. (www.nzf.org.nz)

Appendix A: Healthy Skin tool



HEALTHY SKIN

Keep skin clean * Clean hands often * Cut fingernails * Cover sores and cuts with plaster

					
<p>Well child</p>	<p>Child with minor cut, sore or other skin condition</p>	<p>Child with minor skin infection</p>	<p>Child with skin infection that is getting worse</p>	<p>Child with serious skin infection</p>	
<ul style="list-style-type: none"> • Good food and nutrition is important for healthy skin • Keep skin clean • Wear clean clothes • Keep house clean inside and out • Wash sheets and towels regularly • Treat animals for fleas regularly • Wash hands with soap and water often 	<ul style="list-style-type: none"> • Wash hands with soap and water often • Clean and cover cuts and sores with plasters • Check cuts and sores on a daily basis • Cut and file fingernails • Care for other skin conditions e.g. eczema - use your creams and lotions • Use own sheets and towels • If you need help, ask the nurse or health worker 	<p>See the doctor or nurse today if the sore or redness has any of the following:</p> <ul style="list-style-type: none"> • is the size of a 10c piece or bigger • has pus • is getting bigger • has red lines coming from it • is not getting better within 2 days • is near the eye 	<ul style="list-style-type: none"> • See the doctor or nurse. Medicine (antibiotics) may be required • Get medicine from the pharmacy and start taking straight away • Take the full course of medicines (antibiotics) as prescribed • Don't share medicines with others • Supervise children taking medicine • Go back to doctor if not getting better 	<ul style="list-style-type: none"> • Your child will be sore and very sick • Will need to go to hospital • May need surgery <p>Skin infections, if left untreated, can lead to serious and life-threatening illness.</p>	
<p>RPH-H5001 June 2012</p>	<p>For skin infection information and resources visit www.rph.org.nz Produced by: Regional Public Health, Private Bag 31 907, Lower Hutt 5040, Ph 04 570 9002</p>			<p>Regional Public Health <i>Better Health For The Greater Wellington Region</i></p> 	

NB. This is the latest version with minor changes from the original. Developed by the Keeping Well, Healthy Skin in Greater Wellington Group, Regional Public Health, 2011.

Appendix B: Assessment of a child with a fever

For children with a fever the following assessment procedure should be utilised

- Identify any immediately life-threatening features including compromise of the airway, breathing or circulation and decreased level of consciousness
- Use the “traffic light system” to predict risk of serious illness.

Clinical Condition	Low risk	Intermediate risk	High risk
Skin appearance	<ul style="list-style-type: none"> • Normal colour of skin, lips and tongue 	<ul style="list-style-type: none"> • Pallor reported by parent/carer 	<ul style="list-style-type: none"> • Pale, mottled, ashen, blue
Responsiveness	<ul style="list-style-type: none"> • Responds normally to social cues • Content/smiles • Stays awake or awakens quickly • Strong normal cry or not crying 	<ul style="list-style-type: none"> • Not responding normally to social cues • Wakes only with prolonged stimulation • Decreased activity • No smile 	<ul style="list-style-type: none"> • No response to social cues • Appears ill to a healthcare professional • Does not wake or if roused does not stay awake • Weak, high pitched or continuous cry
Respiratory	<ul style="list-style-type: none"> • Normal 	<ul style="list-style-type: none"> • Nasal flaring Tachypnoea: • 6–12 months RR > 50 breaths/minute • >12 months RR > 40 breaths/minute • Oxygen saturation ≤ 95% in air • Crackles/chest signs 	<ul style="list-style-type: none"> • Grunting Tachypnoea: • RR > 60 breaths/minute • Moderate or severe chest indrawing
Hydration	<ul style="list-style-type: none"> • Normal skin and eyes • Moist mucous membranes 	<ul style="list-style-type: none"> • Dry mucous membranes • Poor feeding in infants • Capillary refill time (CRT) ≥ 3 seconds • Reduced urine output 	<ul style="list-style-type: none"> • Reduced skin turgor
Other	<ul style="list-style-type: none"> • None of the amber or red symptoms or signs 	<ul style="list-style-type: none"> • Fever for ≥ 5 days • Swelling of a limb or joint • Non-weight bearing, not using an extremity • A new lump > 2 cm • None of the red symptoms or signs 	<ul style="list-style-type: none"> • Age 0 – 3 months, temperature ≥ 38°C • Age 3 – 6 months, temperature ≥ 39°C • Non-blanching rash • Bulging fontanelle • Neck stiffness • Status epilepticus • Focal neurological signs • Focal seizures • Bile-stained vomiting
ACTION	Reassure	Review by GP	Refer - Requires immediate admission to hospital

Refer - Requires immediate admission to hospital if ANY of the symptoms or signs in the red column present

- Immediately life-threatening illness – call ambulance
- All other situations – to be assessed in secondary care within two hours

Review by GP: ANY of the symptoms or signs in the amber column, but NONE in the red column

- Diagnosis made – treat accordingly
- No diagnosis – provide parent/carer with verbal and written information on warning symptoms and ensure that they know how to access further healthcare after hours
- Arrange an appointment for follow-up.

Reassure: ANY of the symptoms and signs in the green column, but NONE in the amber or red columns. Provide parent/carer with advice on symptomatic management and when to seek further attention from healthcare services.

Useful advice for parents when caring for children with high fever at home. Also refer to ‘Key messages for parents and caregivers’ on pages 7 and 8.

Managing child’s temperature	Care at home	When to seek further help
<p>DO</p> <ul style="list-style-type: none"> • Use paracetamol if the child appears distressed or unwell • Use ibuprofen if there is no response to paracetamol <p>DO NOT</p> <ul style="list-style-type: none"> • Routinely use paracetamol and ibuprofen together • Use paracetamol for the specific purpose of preventing febrile convulsion • Under-dress or over-wrap the child • Sponge the child (i.e. “tepid sponging”) 	<ul style="list-style-type: none"> • Keep up regular fluids (breast milk if breast feeding) • Look for signs of dehydration: sunken fontanelle, dry mouth, sunken eyes, absence of tears, decreased urine output, overall unwell appearance • Look for signs of a non-blanching rash • Check the child regularly overnight • Keep child away from day-care or school while the fever persists (notify them of illness) 	<ul style="list-style-type: none"> • The child has a fit • The child develops a non-blanching rash • The fever is persistent • The parent/carer feels that the child’s condition is worsening rather than improving • The parent/carer is more worried than when they previously sought advice • The parent/carer is distressed or concerned that they are unable to look after the child

Source: <http://www.bpac.org.nz/magazine/2010/july/fever.asp>, Accessed December, 2011

Appendix C: Recurrent Skin Infections Guidelines³

Preventive educational messages on personal hygiene and appropriate wound care are recommended for all patients with skin and soft tissue infection (SSTI). Instructions should include:

- Keep discharging wounds covered with clean, dry bandages
- Maintain good personal hygiene with regular bathing/ showering and cleaning of hands with soap and water or alcohol-based hand gel; particularly after touching infected skin
- Avoid reusing or sharing personal items (e.g., disposable razors, linens, and towels)
- Avoid sharing bath, swimming, and cleaning water with an infected wound.

Environmental hygiene measures to be considered in the household or community setting:

- Focus cleaning on high-touch surfaces such as counters, door knobs, bath tubs, and toilet seats that may contact bare skin or uncovered infections
- Hot washing of towels, bedding and clothing of patient with skin infection
- Ensure creams used are not contaminated by using spoons, spatulas to remove and decant into smaller containers. Dispose of if contamination suspected.

Decolonisation to be considered where:

- A patient develops a recurrent SSTI despite optimizing wound care and hygiene measures
- Ongoing transmission is occurring among household members or other close contacts despite optimizing wound care and hygiene measures
- Underlying conditions such as eczema, diabetes etc is well controlled.

Decolonisation strategies should be offered in conjunction with ongoing reinforcement of hygiene measures and may include the following:

- Nasal decolonization with mupirocin twice daily for 5 days
- Nasal decolonization with mupirocin twice daily for 5 days **and** topical body decolonization with a skin antiseptic solution (chlorhexidine) for 5–14 days **or** dilute bleach (janola) baths. (1/3 cup in bath or 5ml per 5 litres) given for 15 min twice weekly. *Note: chlorhexidine is not subsidised*
- Oral antibiotic therapy is recommended for the treatment of active infection only. Decolonisation measures must be undertaken at the same time as oral antibiotic treatment.

Where household or interpersonal transmission is suspected:

- Personal and environmental hygiene measures in the patient and contacts recommended.
- Contacts should be evaluated for evidence of *S. aureus* infection:
- Evaluate and treat symptomatic contacts; consider nasal and topical body decolonization in conjunction with treatment of active infection
- Consider nasal and topical body decolonization of asymptomatic household contacts.

³ Adapted from: Preventing Recurrent Skin Infections Pamphlet. Child Health, C&CDHB.

The role of cultures in the management of patients with recurrent SSTI is limited:

- If no screening has been undertaken it is recommended for recurrent cellulitis or cellulitis not improving on standard treatment where there is no exudate, to nasal swab for MRSA
- Surveillance cultures following a decolonization regimen are not routinely recommended in the absence of an active infection.

Appendix D: A Guide to Support and Resources that Help Families to Prevent and Manage Skin Infections



Healthy Skin in Greater Wellington



A guide to supports and resources that help families to prevent and manage skin infections

August 2012

Healthy Skin in Greater Wellington, Regional Public Health, Hutt Valley DHB, C & C DHB and Wairarapa DHB.

Introduction

This booklet is intended as a guide to the many resources and services available in the community that may support families/whanau and their children to better manage skin conditions and infections.

The information in the booklet includes supports and resources from around the Wellington region.

It is designed for health professionals, social workers, community support workers or social services workers who may work with a family or child with skin health issues, for example, Work and Income Case Managers, Barnados, social workers.

It aims to be a useful and practical guide. It may be copied and circulated as long as the reference is acknowledged.

We welcome your feedback and ideas for the inclusion of other supports related to skin care and management. Please email KeepingWell@huttvalleydhb.org.nz

The booklet will be updated annually.

Disclaimer

We do not presume to include all the resources and supports available in relation to the prevention and management of skin infections, but have endeavoured to provide a range of services. We will update the booklet annually. Regional Public Health takes no responsibility for any errors, omissions in or for the correctness of the information contained in this booklet. Regional Public health does not accept any liability for error or fact, omission or opinion, which may be present, nor for the consequences of any decisions based on this information.

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1 Key Healthy Skin Messages

- Healthy food and adequate sleep is important for healthy skin
- Wash hands with soap and water often
- Keep skin clean
- Wash towels and sheets regularly
- Keep nails short and filed. Avoid scratching
- Keep skin cuts and sores clean and covered

Families/whanau or individuals should be advised to seek medical attention if a sore or area of redness has any of the following features:

- Is greater than the size of a ten cent coin (approximately 1.5 cm)
- Increasing in size
- Has pus
- Has red streaks coming from it
- Is not getting better within two days
- Is located close to the eye

If skin infections are left untreated serious complications can occur that may require hospitalisation including:

- Deeper abscesses, which can form in the lungs, kidneys, joints, muscles, bone and brain
- Septicaemia
- Osteomyelitis and septic arthritis (infections in the bone)
- Acute glomerulonephritis (kidney problems)

A skin infection in a person who has an illness that affects their general health like cancer or diabetes requires closer monitoring. It is also important to determine if there is a history of injury with the possibility of a foreign body within the wound.

‘See your family doctor or nurse quickly if a wound becomes infected’

2 Skin Infections, First Aid, Care and Prevention of Spread

- Prevent serious skin infection by having some first aid supplies
- Families/whanau need a basic first aid kit to be able to **clean** wounds and hands often, **cut** fingernails short, and **cover** injuries to prevent further infection
- If a person has a break in their skin or a sore, change the dressings or plasters daily
- Children should not go to school or Early Childhood Centre without wounds being covered
- If a child is taking antibiotics for a skin infection, they should stay home from school or Early Childhood Centre for the first 24 hours on the antibiotics
- Covering a wound helps it to heal, reduces infection getting into the wound and helps stop infection spreading to others

ITEM
Pam's First Aid Pack – available from supermarkets Contents of pack: <ul style="list-style-type: none">• Bandage• Gauze• Tape• Plasters• Plaster strip• Scissors
Supermarket:
<ul style="list-style-type: none">• Plaster strip

3 Preventing the Spread of Infection

These basic supplies will help to prevent the spread of skin infections within the household.

Towels:

- Each family/whanau member should have their own towel and not share towels with others
- If someone has a skin infection, their towels should be washed and dried each day separately from other family/whanau members. **Remember a small towel is sufficient to dry a child and reduces washing load**

Bedding:

- People in the house should have their own bedding
- If someone has a skin infection, bedding should be washed and dried separately to other family/whanau members
- If someone has an infection, bedding/towels should be washed after members of the household have used them

Available at most department stores e.g. The Warehouse, Briscoes

ITEM
• Towel
• Bath Towel
• Face Cloth
• Household Bleach
• Washing Machine
• Vacuum Cleaner
• Duvet Cover Set
• Pillow / Pillow case
• Sheets
• Bed and mattress
• Warehouse Fold Out Bed

Hygiene

- All members of the family/whanau should bath or shower often to keep skin clean and use soap or a soap substitute where dry skin is an issue
- Household surfaces such as the bath, shower, kitchen bench, tables, should be cleaned regularly with soap and water.(normal cleaning is all that is necessary- see below)

The role of antiseptics

Many clinicians use antiseptic solutions or creams when cleaning a wound or insect bite. Although there is no clear evidence that antiseptics are not effective, there does not appear to be any evidence that they are any better than simple cleaning practices, e.g. thorough washing. There is also concern that unnecessary use of antiseptics or disinfectants around the house may promote bacterial resistance. Active promotion of the use of antiseptics is not recommended.¹

The use of plain soap is recommended for hand washing. Household antibacterial soaps are generally no more effective than plain soap in reducing bacterial levels on the hands, or in reducing infectious diseases.² If dry or sensitive skin is a problem, a soap substitute such as aqueous cream or a cleanser that has the same pH as the skin (5.5) can be used. Alcohol hand rubs are also effective at reducing bacterial load.

Some families may find adding Janola bleach to bathwater useful for reducing the bacterial load on the skin, 5ml Janola per 5L of water twice a week. This is approximately 100mls (1/3 cup) for a 15cm deep full sized bath. Use 1 capful for baby's baths.³ Care should be taken to clarify measurement with a 'bottle cap' so as not to be misunderstood as a 'cupful'.

Bleach should never be used directly on the skin.

ITEM
<ul style="list-style-type: none">• Soap/Body Wash Pump/Soap Substitute• Household bleach for use in the bath

¹ Hunt D. Assessing and reducing the burden of serious skin infections in children and young people in the greater Wellington region. Six-month report January - July 2004 and update on progress. Wellington: Capital and Coast DHB, Hutt Valley DHB and Regional Public Health, 2004.

² Dermatological Society of New Zealand. Dermnet. Available from: www.dermnetnz.org (accessed Oct, 2010).

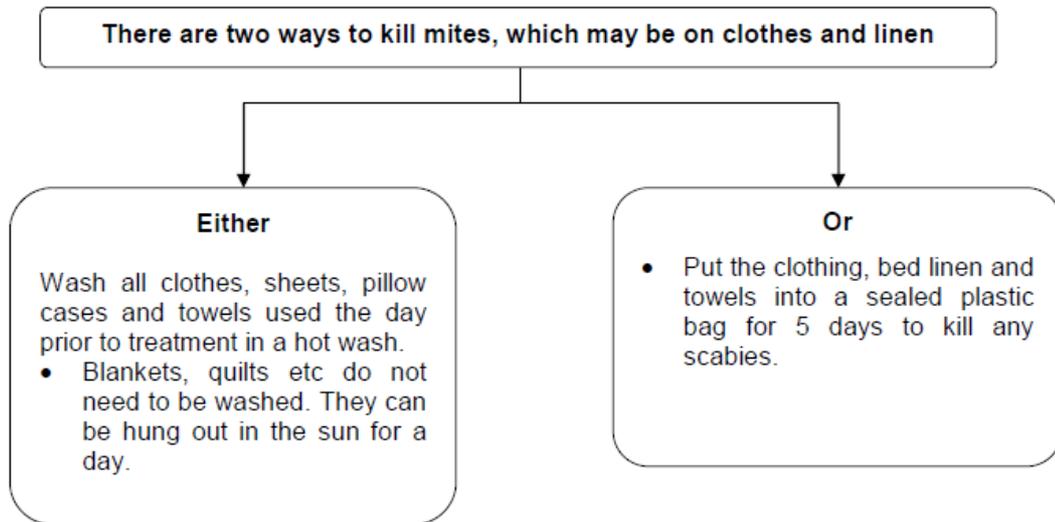
³www.adhb.govt.nz/starshipclinicalguidelines/Cellulitis.html (accessed August, 2012)

4 Insect Bites and Mites

Prevent serious skin infection by ensuring families/whanau have the appropriate basic supplies to reduce the number of insect bites that occur in the home environment.

Fleas, scabies and head lice bites can become infected if left untreated.

Scabies



Extra bedding may be needed in order to do this. Put aside clothing or other items that cannot be washed, such as dry cleaning or the toy the child sleeps with for five days.

Fleas

It is recommended that if any beds, mattresses, sofas, chairs and carpets are brought from a second-hand shop, that they are sprayed with flea spray or flea powder for fleas, before the family/whanau use them.

If fleas are a problem in the house, treat all pets for fleas at the same time as the infestation is treated inside the house. Carefully put all bedding/clothes where fleas have been detected in a hot wash. Spray all affected areas of carpet, furnishings and areas where the pet sleeps with a flea spray. Vacuum regularly.

The following are examples of products available to treat domestic animals:

ITEM
• Flea Spray
• Flea Powder
• Flea Cat or Dog Tablets
• Vet and Pet Shop Cat or Dog Flea Treatment
• Flea Cat or Dog Collar

If family/whanau members have flea bites, use the following products to get rid of fleas from the home:

ITEM
• Supermarket Flea Carpet Powders/Shampoo/Spray
• Supermarket Flea Bomb
• Vet and Pet Shop House Flea Kit – Lasts 12 months
• Pest Eradication Services

Please note: Products designed for animals are not for human use.

For severe infestations a pest eradication service should be used.

Examples of services are given below; others are also available:

COMPANY	PHONE NUMBER
• Rentokil	0800 736 865 06 370 1011 (Wairarapa)
• Fabricare/Floor Care	(04) 565 0390

<ul style="list-style-type: none"> • JAE Carpet Cleaning and Pest Control Services 	0800 225 552 06 377 5585 (Wairarapa)
<ul style="list-style-type: none"> • Pest Proof 	(04) 476 2444 Wellington (04) 589 2101 Hutt
<ul style="list-style-type: none"> • Target Pest Ltd 	0800 77 55 11 (Wairarapa)

Examples of products available to treat head lice and scabies. This list is not exclusive, other products are available:

ITEM	
Head lice <ul style="list-style-type: none"> • Organophosphates (malathion, also known as maldison). (Preferred and is subsidised by Pharmac) • A-Lices Scalp and Body Hygiene Shampoo • Derbac-M Liquid • Malathion Lotion • Prioderm Cream Shampoo • Pyrethrum / pyrethrin / Phenothrin • Synthetic pyrethroids (permethrin) 	Head lice <ul style="list-style-type: none"> • Conditioner Budget 1L and comb through to remove all eggs and lice
	Scabies <ul style="list-style-type: none"> • 5% Permethrin cream, left on for 8-10 hours (preferred) • 25% Benzyl benzoate lotion, applied daily for 3 days • 0.5% Aqueous malathion lotion, left on for 24 hours

Mosquitoes

Prevent serious skin infection by ensuring families/whanau have the appropriate basic supplies to reduce the number of bites that occur in the indoor and outdoor environment.

Examples of products available are listed below. This list is not exclusive, other products are available:

ITEM	
<ul style="list-style-type: none"> • Aerogard Aerosol • Aerogard Roll On • Aerogard Spray 	<ul style="list-style-type: none"> • Off Skintastic Aerosol • Off Skintastic Spray

Mosquitoes need water to breed so a simple way to stop them breeding is:

- Get rid of objects outside that hold water, including pot plant saucers, jars, bottles or old tyres
- Regularly empty and refill drinking bowls for pets

Please inform your local City Council if you see areas of dirty water, or rubbish dumped on council land:

- Hutt City Council (04) 570 6666
- Wellington City Council (04) 499 4444
- Porirua City Council (04) 237 5089
- Masterton District Council (06) 370 6300
- Carterton District Council (06) 379 4030
- South Wairarapa District Council (06) 306 9611
- Upper Hutt City Council (04) 5272169

Dusk and dawn are high-risk times of the day for mosquito bites so:

- Wear long sleeved shirts and trousers
- Use insect repellent
- Don't leave windows open and lights on – this will attract mosquitoes inside

5 Eczema

Children should be initially assessed by a doctor or nurse experienced in the treatment of eczema.

Most of the items needed e.g. emollient cream will be available on prescription and can be obtained in three-month quantities for low cost.

Oilatum Plus (Oilatum plus bath oil) is not available on prescription but is shown to reduce the occurrence of infected eczema. If the eczema is severe, a disability allowance may be applied for, check income criteria and if appropriate make a referral to Work & Income - see Financial Supports section.

Oilatum Plus has antibacterials & emollient in it so can be used on a daily basis to help with management of flared eczema or infection. It can also assist with minimising eczema flares and skin infections. It can be used with infants under 6 months, use 4-8 capfuls in an 8inch bath. For good management your health professional is likely to advise that you use additional emollient in the bath as well as Oilatum Plus. QV Flare up is a similar product which can be used instead of Oilatum Plus.

Bleach is a good alternative (see page 7) to Oilatum Plus or QV except perhaps for children 12 months and younger or if your child has raw or large areas of broken skin. Bleach can be drying to the skin so you can add extra emollient into the bath water. Ideally a health professional will be working with the child if they are having recurrent eczema flares or skin infections.

Bepanthen antiseptic cream and Bepanthen first aid both have antibacterial properties so your health professional may advise the use of these. Used on skin that is broken or raw they can minimise the risk of infection. They also act as barriers and will assist with healing.

ITEM
• Oilatum Plus
• Household bleach
• Qv Flare up
• Bepanthen cream

6. Bacterial Skin Infections (Impetigo or School Sores) (often caused by *Staphylococcus aureus*)

S. aureus is a bacterium that lives on the skin and can cause serious skin infections. The infection can easily be spread between family/whanau members.

If a person has skin infections which are not getting better with simple hygiene measures, they should be assessed by a doctor or nurse. The doctor or nurse may recommend further hygiene measures and/or antibiotics and/or antiseptic body wash. Antiseptic body wash such as Chlorhexidine may be prescribed by your health professional and can be bought from a community pharmacy.

Other family/whanau members often carry *S. aureus* bacteria and are treated with the body wash at the same time, to reduce the chance of spreading infection amongst family/whanau members.

ITEM
<ul style="list-style-type: none">Chlorhexidine 4% Body Wash (Chlorhexidine Surgical Scrub 4% in 500ml pump pot)

7 Health Supports

Family doctor or medical Centre – phone the local medical centre to make an appointment with doctor or the nurse may be able to help without the need to see the doctor.

Community Health Workers – phone your local medical centre/GP to ask if a community health worker is available.

Social Workers – phone your local medical centre.

Public Health Nurses can see children in the school setting, but need a referral from the school or caregiver. Talk with your child's school about the Public Health Nurse in your area.

Public Health Advisors can provide advice and support in some cases, especially for Early Childhood Services, schools, the general public. Phone 570 9002, or Wairarapa 06 946 9800

Evolve in Wellington City – ph. 801 9150 and Vibe in Lower and Upper Hutt – ph. 566 0525 are Youth Health Services that provide free health care for young people aged 10 – 25 yrs.

Accident and Emergency Services Wellington – ph. 384 4944

After Hours Medical Centre – Lower Hutt, ph. 5675345

After Hours Medical Centre – Upper Hutt, ph. 528 0111

Kenepuru After Hours Medical Centre - ph. (04) 567 5345

Team Medical After Hours Medical Clinic - Coastlands, Kapiti, ph. 04 297 3000

Masterton Medical (24 hours for Wairarapa) - ph. 06 370 0011

Pharmacist – the local pharmacist can also provide advice and supports for a skin condition or infection.

8 Healthy Housing Supports

Sustainable Housing Trust – provide 60 % – 80 % subsidy for insulation for Community Service Card holders in the Wellington region.

Warm Fuzzies programme can help tenants; landlords and home owners take simple steps to make homes healthy and cheaper to run at the same time. They offer free phone advice on 0508 787824. Health professionals can also refer clients for insulation and receive up to 80% subsidy through the Sustainability Trust.

Check www.sustaintrust.org.nz or call 0508 787824 for referral forms and information about their many services.

In the **Wairarapa**, people with a community services cards and health issues that meet specific criteria can be referred by a health provider to Healthy Homes for up to 100% subsidy on insulation. Ph. **Energy Smart** 06 370 1019, or 0800 777 111.

Hutt Valley Healthy Housing programme – provides a health and housing assessment for some Housing NZ houses in the Hutt Valley; phone 570 9002.

CRISIS (Children's Recurrent Skin Infection Service) – for families/whanau with chronic skin reinfection issues. Must be referred by a GP or nurse and meet certain criteria. Contact the Porirua Community Nurses or Social Worker, Ph. 918 2003. (For Porirua families only).

Trash Palace in Porirua will pick up inorganic rubbish (two deliveries per year for a household), and recycle e-waste, plastics and white ware. Ph. 237 6440. This service is for Porirua households only.

Lawn mowing and garden clean up (small cost) Ph.237 6213. This service is for Porirua households only.

Low cost linen can be accessed through the Salvation Army shops around the region.

Curtain Banks:

Hutt Valley - 527 9900 The Curtain bank provides free curtains to Community Service Card holders (low income families without a Community Service Card will be asked for a small contribution towards the cost of the Curtains)

Porirua & Wellington - 389 3200 xt 705 The Wellington Curtain Bank at the Sustainability Trust provides free curtains to Community Service Card holders

9 Medication Supports

Promeds – The Salvation Army in Cannon’s Creek may provide vouchers for one-off medications for some high need clients. Ph. 235 6266. (For Porirua community only).

Ask the local GP, nurse or primary health care provider if there is access to support for medications. Some providers have a scheme for low income families.

10 Financial Supports

Ministry of Social Development

Work & Income NZ – ‘Promoting Healthy Skin’ Referral Form

A health worker can make a referral to Work and Income for items to help with skin care and hygiene and for medications.

Once a referral is made, each family/whanau member will be assessed to see that they are getting a full and correct entitlement from Work and Income and if they can receive support to manage their skin infection issues.

The Skin Health Referral Forms can be downloaded on www.rph.org.nz – go to the Healthy Skin link

Once completed please ensure that the client takes the referral form with at least one reasonable quote to the appropriate office listed below. NB: Only one quote is required if it has been obtained from a ‘cheaper’ end store such as Warehouse or Briscoes.

Income Limits

Eligibility for Special Needs Grants and Recoverable Assistance Payments are dependent on gross weekly or annual income. Advance Payments may be available to clients already on a benefit. If a client receives less than the total incomes listed on the form they can apply for assistance.

If a child in the family has severe eczema, the family/whanau may be entitled to a Disability Allowance and/ or a Child Disability Allowance.

The Child Disability Allowance does not depend on income limits and is considered on a case-by-case basis for children under the age of 18.

Child Disability Allowance

Child Disability Allowance is a fortnightly payment made to the main carer of a child or young person with a serious disability. It is paid in recognition of the extra care needed for that child. This is a non-means tested allowance.

In order to apply for this allowance you need to ring WINZ on 0800 559 009 and have them send you the application form. The Brochure:

<http://www.workandincome.govt.nz/documents/disability-assistance-alla0014.pdf>

Disability Allowance:

The Disability Allowance is for people who have a disability and need help with everyday tasks or ongoing medical care. It helps with things like regular visits to the doctor or hospital, medicines, extra clothing or travel if these arise from your disability. This is a means tested allowance. To apply ring WINZ on 0800 559 009.

ACC for Infections that are a result of an Insect Bite – ACC may cover the cost of the item for the individual being treated if an infection has occurred as a result of an injury or external force (such as a bee, insect or spider). An endorsement letter from a GP would be required and pre-approval by ACC. Call the ACC Provider Line on 0800 222 070 to enquire.

Mercy Rose Children's Health Fund – may provide funding for some items to help with skin infection issues for preschool children through to Year 8. Please call Sister de Porres on 496 1757.

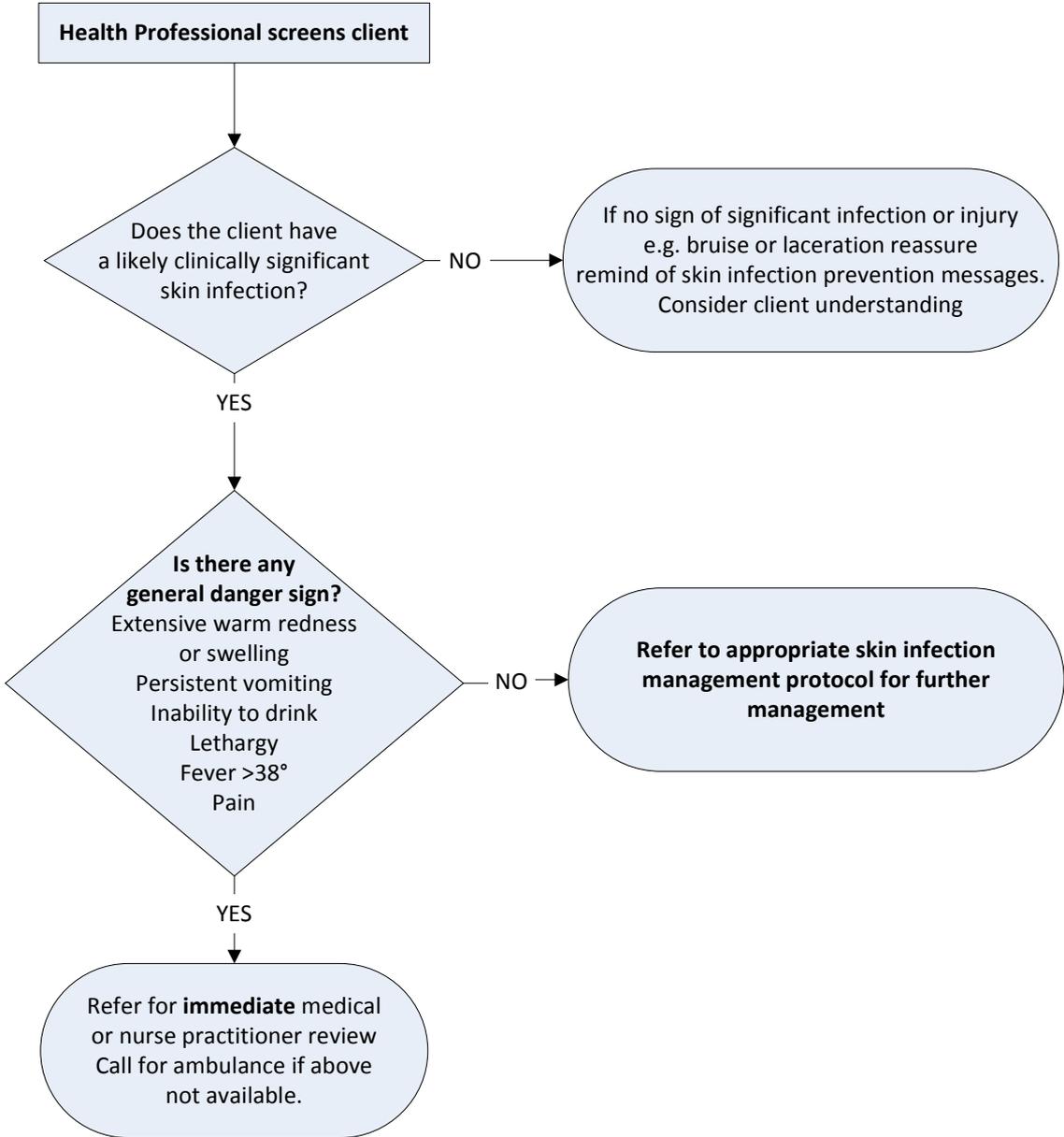
11 Related websites and resource information

RELATED WEBSITES	
Skin Infections, general information and resources www.rph.org.nz go to Healthy Communities, Healthy Skin	For up to date information on the prevention and management of skin infections see: BPAC Journal November 2010 http://www.bpac.org.nz/magazine/2010/november/infectious.asp?section=4
Kids Health www.kidshealth.co.nz	Work and Income Support www.workandincome.govt.nz Phone: 0800 559 009
Itchy Kids, eczema www.itchykids.org.nz	Housing New Zealand Corp www.hnzc.co.nz Phone: 0800 801 601 Sustainable Trust - for free advice on having a warm and dry home. Take referrals. Can provide up to 80% subsidised insulation www.sustaintrust.org.nz
DermNet http://dermnetnz.org/dermatitis/dry-skin.html	For further information see " Antibiotic choices for common infections ", BPJ 21, (Jun, 2009).
ACC www.acc.co.nz Phone: 0800 222 070	For further information see " Scabies diagnosis and management ", BPJ 19 (Feb, 2009). For further information see " Management of impetigo ", BPJ 19 (Feb, 2009)

Contact: Public Health Advisor
 Promoting Healthy Skin Programme
 Regional Public Health
 Phone: (04) 570 9002

Appendix E: Algorithms for Management of Skin Conditions

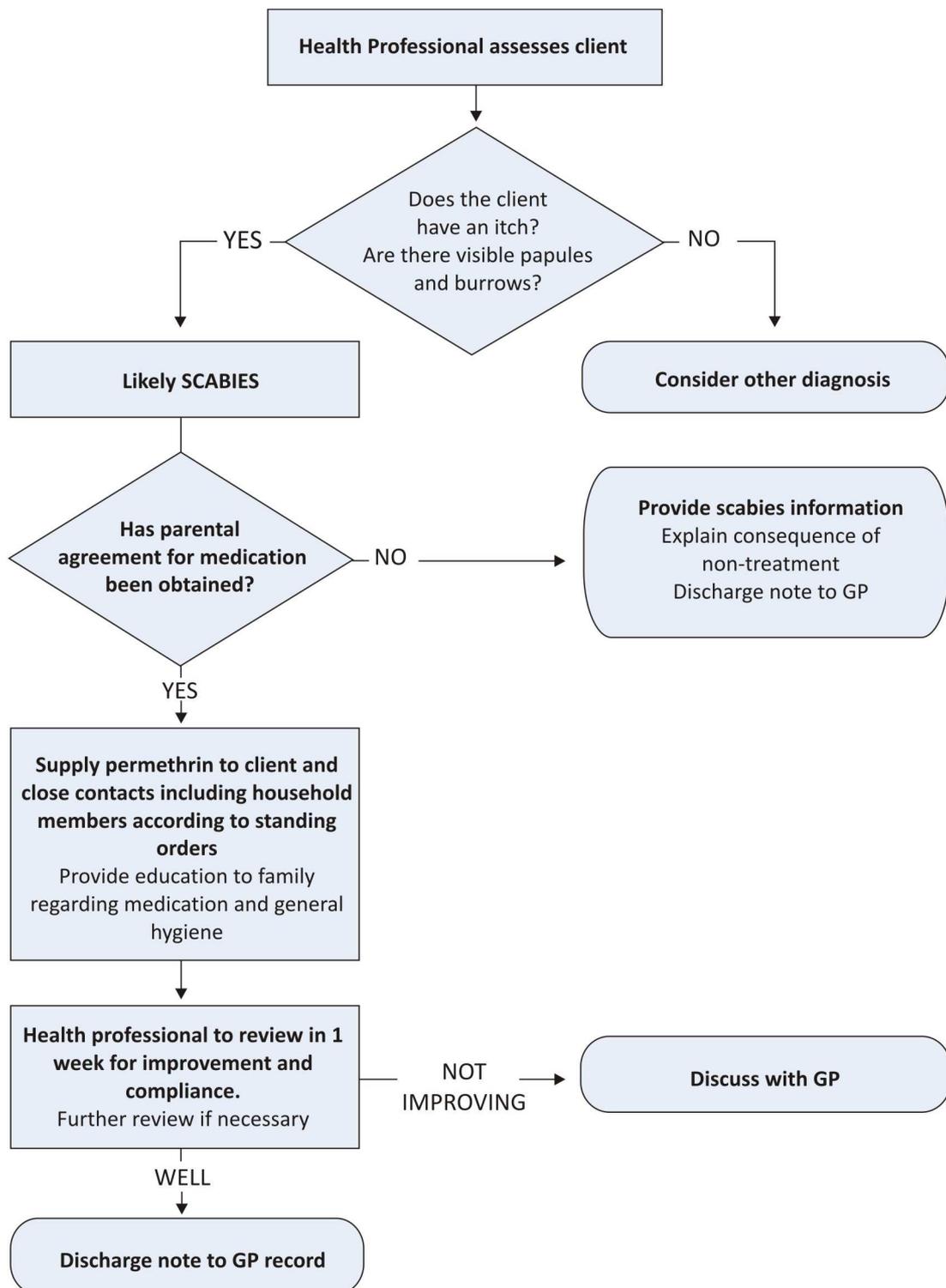
Assessment and Screening of General Skin Infection



Regional Public Health, Hutt Valley DHB, Wairarapa DHB & Capital and Coast DHB. (2012). Healthy Skin in Greater Wellington: Protocols for the management of skin infections in children and young people in the community and primary health care setting. Wellington.

Adapted from the Manual of Operations for a Registered Nurse-Led, Primary School-Based, Primary Health Care Programme Wiri Central Primary School, Manukau City, Counties Manukau DHB, 2011.

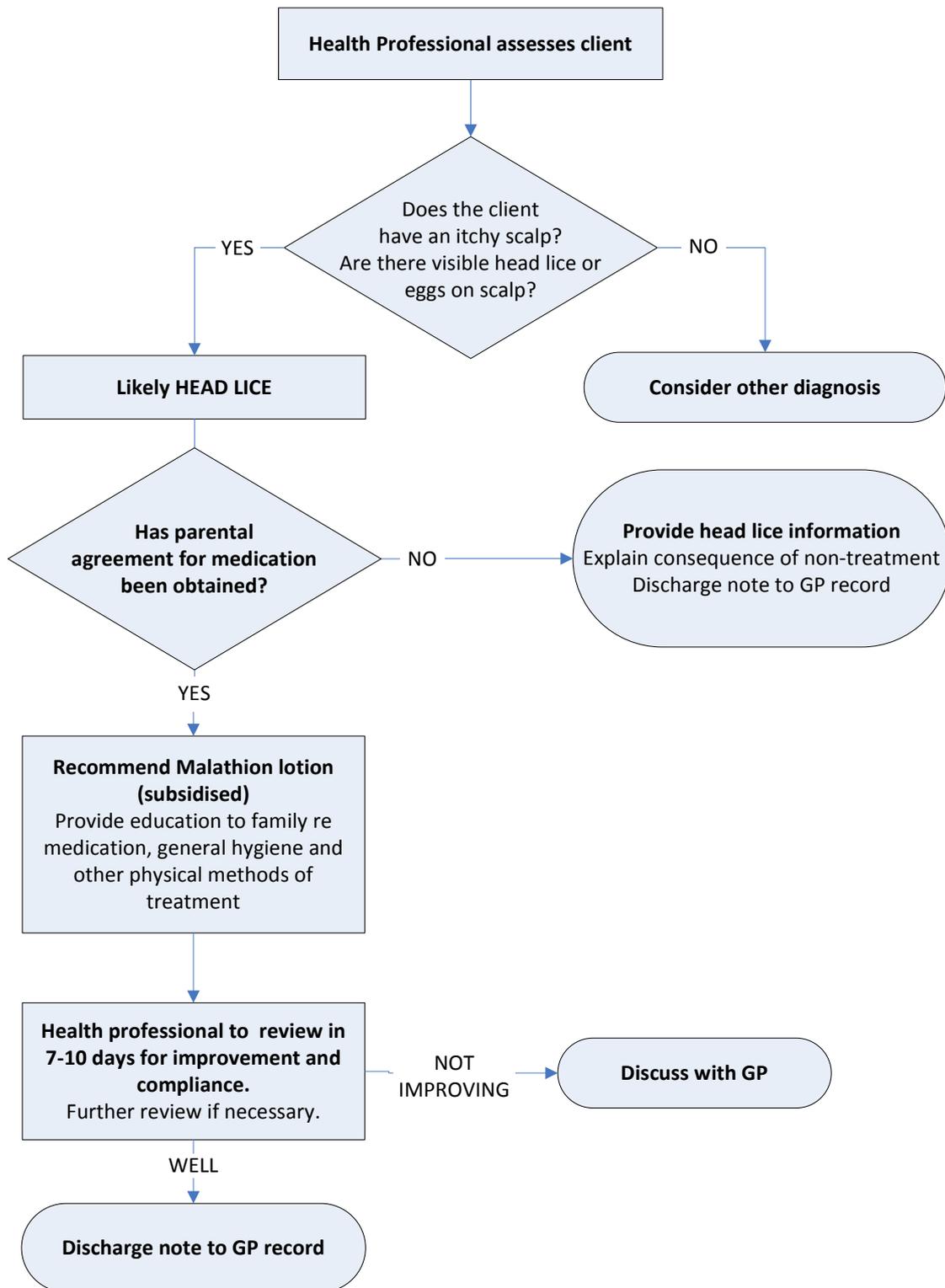
Management of Scabies



Regional Public Health, Hutt Valley DHB, Wairarapa DHB & Capital and Coast DHB. (2012). Healthy Skin in Greater Wellington: Protocols for the management of skin infections in children and young people in the community and primary health care setting. Wellington.

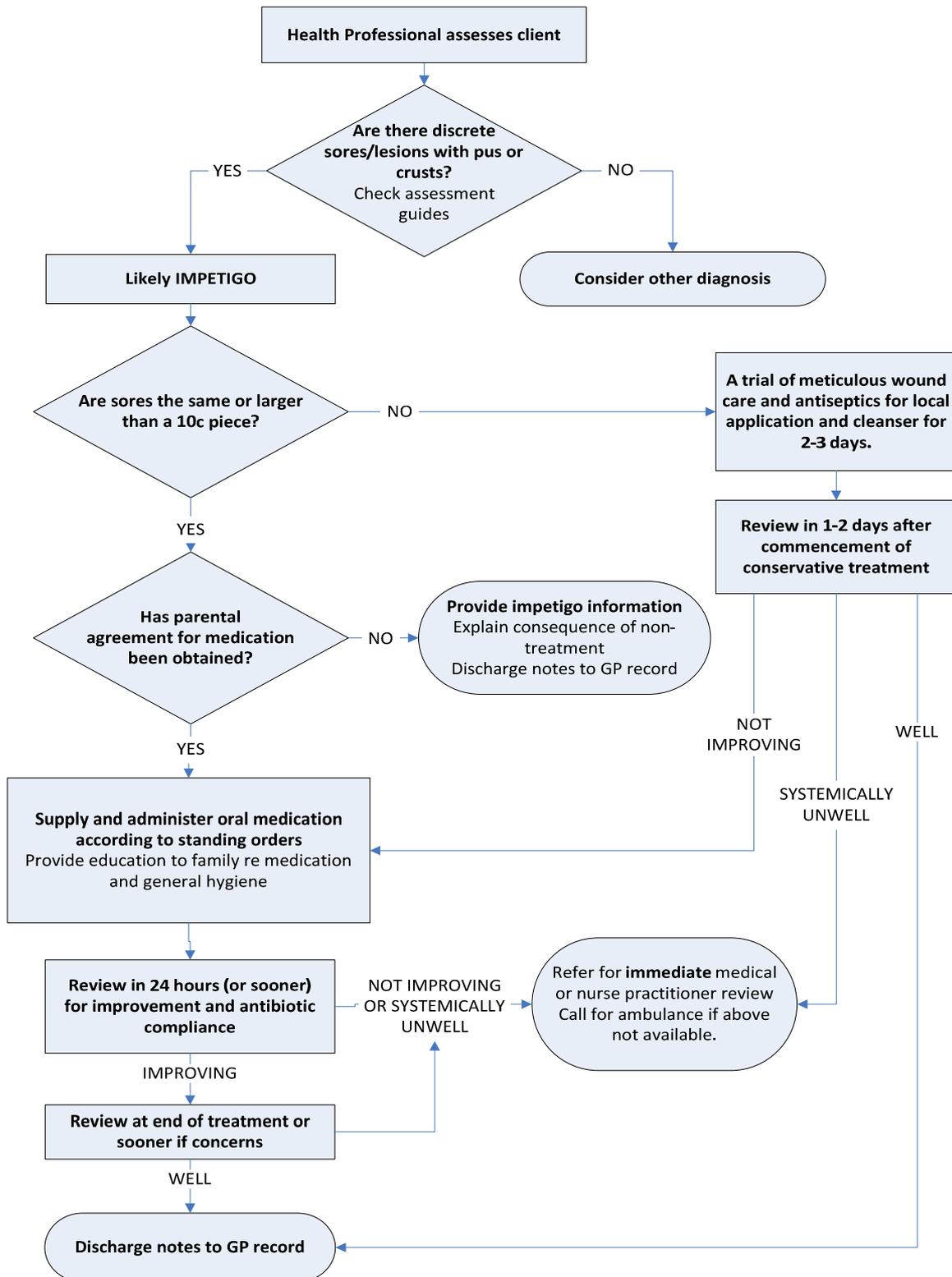
Adapted from the Manual of Operations for a Registered Nurse-Led, Primary School-Based, Primary Health Care Programme Wiri Central Primary School, Manukau City, Counties Manukau DHB, 2011.

Management of Head Lice



Regional Public Health, Hutt Valley DHB, Wairarapa DHB & Capital and Coast DHB. (2012). Healthy Skin in Greater Wellington: Protocols for the management of skin infections in children and young people in the community and primary health care setting. Wellington.

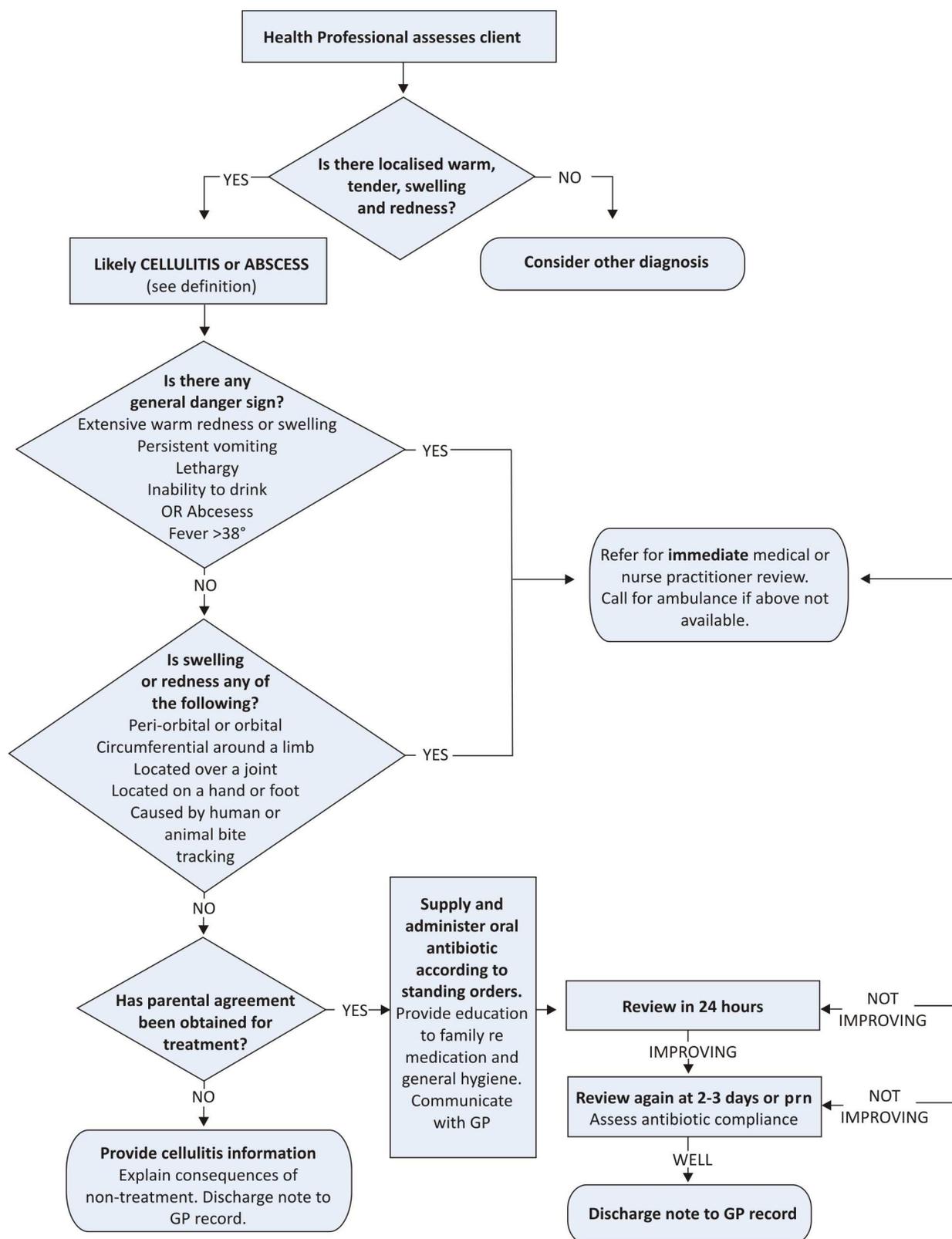
Management of Impetigo



Regional Public Health, Hutt Valley DHB, Wairarapa DHB & Capital and Coast DHB. (2012). Healthy Skin in Greater Wellington: Protocols for the management of skin infections in children and young people in the community and primary health care setting. Wellington.

Adapted from the Manual of Operations for a Registered Nurse-Led, Primary School-Based, Primary Health Care Programme Wiri Central Primary School, Manukau City, Counties Manukau DHB, 2011.

Management of Cellulitis and Boils



Regional Public Health, Hutt Valley DHB, Wairarapa DHB & Capital and Coast DHB. (2012). Healthy Skin in Greater Wellington: Protocols for the management of skin infections in children and young people in the community and primary health care setting. Wellington.

Adapted from the Manual of Operations for a Registered Nurse-Led, Primary School-Based, Primary Health Care Programme Wiri Central Primary School, Manukau City, Counties Manukau DHB, 2011.

Appendix F: Useful links for information regarding antibiotics and dosages

Medsafe Datasheets:

Amoxicillin:

<http://www.medsafe.govt.nz/profs/Datasheet/o/Ospamoxcapsuspdrops.pdf>

Erythromycin Ethyl Succinate:

<http://www.medsafe.govt.nz/profs/Datasheet/e/Ees200susp.htm>

Sodium Fusidate 2% Ointment:

<http://www.medsafe.govt.nz/profs/Datasheet/f/Fobancrmoint.pdf>

Cephalexin Monohydrate:

<http://www.medsafe.govt.nz/profs/Datasheet/c/cefalexinsandozcapsusp.pdf>

Flucloxacillin:

<http://www.medsafe.govt.nz/profs/Datasheet/f/FlucloxacillinAFTcapssoln.pdf>

Co-Trimoxazole:

<http://www.medsafe.govt.nz/profs/Datasheet/d/Deprimsusp.pdf>

The Royal Children's Hospital, Melbourne, website, especially for paediatric dosages:

See: <http://www.rch.org.au/rch/health-professionals.cfm>

Appendix G: Standing Order Template Guide

Issued: 00/00/0000		Review date: 00/00/0000
Medicine Standing Order Title	<p>Name the condition you are treating under this standing order – eg, urinary tract infection (UTI), scabies.</p> <p>A standing order covers the treatment of a specified condition. This may involve directions for several different medicines with clear indications for the use of each medicine.</p>	
Rationale	Explain why the standing order is necessary.	
Organisation/clinic	Name and address of the organisation where the standing order is being used.	
Scope (the condition and patient group)	eg, for the treatment of UTI in females over 12 years of age.	
Medicine/s	Name, strength and dose form.	
Dosage instructions for each medicine	eg, 300 mg at night for 3 days.	
Route of administration	eg, oral, deltoid intramuscular or deep subcutaneous injection.	
Indication/circumstances for activating the standing order	eg, to provide post-coital (or emergency) oral contraception to clients in a school clinic or for the treatment of a UTI (with frequency, urgency and/or dysuria and positive dipstick test) without complicating factors.	
Precautions and exclusions that apply to this standing order	eg, pregnancy, breastfeeding, allergies, contraindications.	
Persons authorised to administer the standing order	Name or class of health professional (eg, registered nurses).	
Competency/training requirements for the person(s) authorised to administer	eg, prior to administering paracetamol under this standing order the registered nurse is required to undergo the in-house training on the policy, procedure and documentation requirements for standing orders. A record of this training will be kept.	
Countersigning and audit	<p>The standing order must specify whether countersigning is or is not required for every administration and/or supply (and under what circumstances).</p> <p>Note: The standing order must be either individually countersigned or included in the monthly audit by the issuer. If countersigning is required, define the timeframe (eg, within 24 hours of administration); if countersigning is not required, define the audit sample (eg, 20% of standing order treatments once a month).</p>	
Definition of terms used in standing order	eg, dysuria is pain or difficulty on urination.	

Additional information	Documentation (administration/supply information – including validated dose reference charts); initial and ongoing assessment requirements. Note any supporting documents, eg, policy, guidelines or decision support tools, attached to this standing order.
-------------------------------	--

Signed by issuer:

Name:		Date:	
Title:	Medical practitioner or dentist		

Notes:

This standing order is not valid after the review date. The review date is one year after the date that the order was signed by the issuer.

The organisational standing order policy and procedure must be signed by management, the issuer and every person operating under standing orders, and attached to the standing order.

Source: Ministry of Health, (2012). *Standing Order Guidelines*. Wellington. Author.

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Appendix H: Feedback to the Protocols document

Feedback to the Protocols document was sought from:

Capital and Coast DHB – Primary Secondary Clinical Governance Group, Planning and Funding team, Infectious Diseases Team, Infection Prevention and Control Team, Paediatric Team, Paediatric Pharmacist, Maori Health Advisory Group, Pacific Health Advisory Group, Child Health Group.

Hutt Valley DHB – Infection Prevention and Control Team, Community Paediatric team, Public Health Nurses team, Medical Officer of Health, Maori Health Advisory Unit, Pacific Health Advisory Unit, Primary, Secondary Strategic Group, Pharmacist, Skin Infections Programme Advisory group, RPH.

Wairarapa DHB – Paediatrician, Child Health, Public Health

Valley PHO – Team Leader Outreach Nursing Team, Clinical and Quality Governance Group

Compass PHO – Clinical Board, Clinical and Quality Team

Wairarapa PHO, Ora Toa PHO, Cosine PHO, WellHealth PHO

Porirua Kids Project group

Waitangirua Pharmacy

Dr Archie Kerr – Paediatrician, retired.

Dr Annie Lincoln – GP Liaison Wairarapa DHB

Dr Lise Kljakovic – Clinical Director Upper Hutt Health Centre, Upper Hutt

Dr Jeff Lowe – Clinical Director Karori Medical Centre, Wellington

Dr Bernard Leuthart - Clinical Director Waiwhetu Medical Centre, Lower Hutt

Chris Masters - Clinical Director Ropata Medical Centre, Lower Hutt

Dr Anne O'Connor - Clinical Director Hutt Union and Community Health Service, Petone

