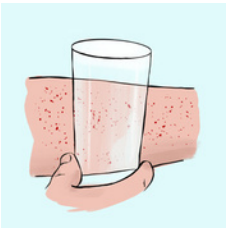
Rashes of Concern in Children

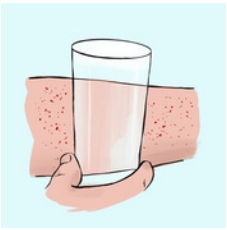
Rashes in infants and children are common. Children will often develop a rash during or after a viral illness. Viral rashes are not usually problematic, however there are some rashes are a cause for concern. This skill sheet describes some of the rashes that are of particular concern to the paediatric population. These children require urgent medical review.

Non-blanching rash assessment

Rashes can be described as blanching or non-blanching. To distinguish whether the rash is blanching, use your fingers to place gentle pressure on the affected skin area. If the rash disappears with pressure it is considered a 'blanching rash'. If the rash does not disappear, it is considered a 'non-blanching rash'. Parents are encouraged to test this at home by using a clear glass.



Non-blanching rash



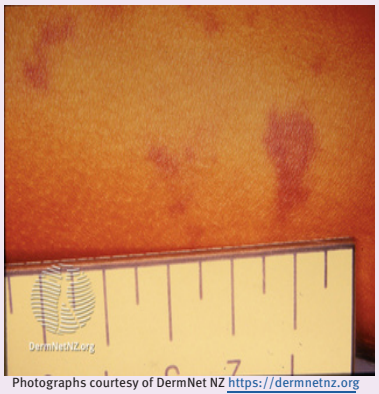
Blanching rash

Paediatric Rashes of Concern

Purpura

- Purpura appears as large (greater than 2mm) non-blanching purple spots or an unexplained bruise.
- Purpura may indicate a serious bacterial infection such as Menigoccoccal.

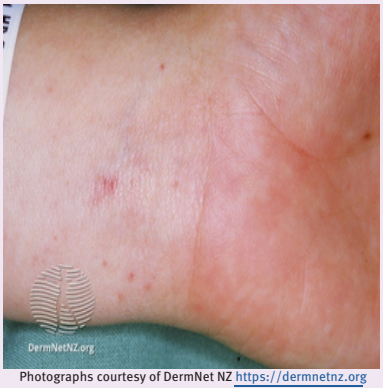
Urgent medical review is necessary to ensure timely treatment with antibiotics as required.



Photographs courtesy of DermNet NZ https://dermnetnz.org

Petechiae

- Petechiae are non-blanching pinpoint spots.
- When associated with fever it can be caused by several conditions including Meningococcal, Streptococcus pneumoniae, Haemophilus influenzae or other viruses.
- As the presence of petechiae can indicate a serious bacterial infection, urgent medical review is necessary to ensure timely treatment with antibiotics as required.



Photographs courtesy of DermNet NZ https://dermnetnz.org

ALERT

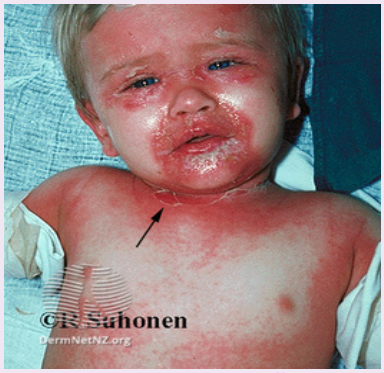
The presence of purpura and petechia can represent a serious bacterial infection. These children MUST have an urgent medical review for consideration of antibiotics for treatment.

If Meningococcal is suspected, it must be reported as a notifiable disease.

Paediatric Rashes of Concern (continued)

Staphylococcus Scalded Skin Syndrome

- Staphylococcus scalded skin syndrome presents as red blistering skin that looks similar to a burn or scald. This is usually accompanied by fevers and irritability.
- Staphylococcus scalded skin syndrome is caused by the release of exotoxins from toxigenic strains of bacteria Staphylococcus aureus.
- Urgent medical review is necessary to ensure timely treatment with antibiotics as required.



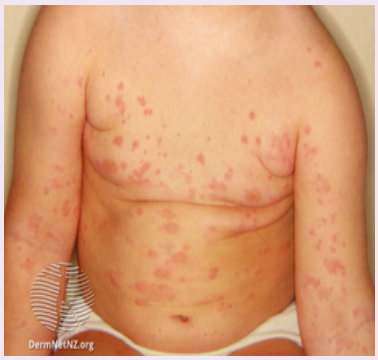
Photographs courtesy of DermNet NZ https://dermnetz.org

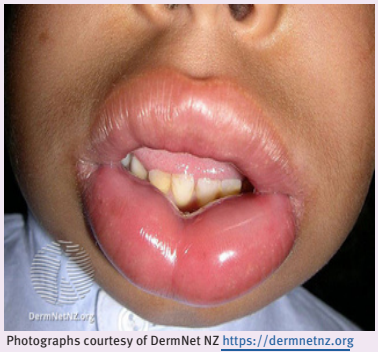
ALERT

Any child presenting with a staphylococcus scalded skin syndrome rash must have an urgent medical review. It is a serious bacterial infection that requires timely administration of antibiotics.

Urticaria and Angioedema

- **Urticaria:** commonly referred to as hives, affects the skin layers (epidermis & dermis) and appears as slightly raised red patches on top of the skin, that can occur anywhere on the body. These patches can be both very itchy and painful.
- **Angioedema:** affects the tissues beneath the skin (subcutaneous tissues) and mucous membranes causing redness and swelling. It can affect areas such as ears, eyelids and genitals. Most concerningly, it can affect the lips, tongue and throat causing airway compromise.
- Urticaria and angioedema can occur in response to an allergic reaction.
- Allergic reactions can occur with medications (including vaccinations), foods, environmental factors and materials such as latex.
- It is important to assess for signs of anaphylaxis, as it can be life-threatening and prompt administration of adrenaline may be required.





Photographs courtesy of DermNet NZ https://dermnetz.org

ALERT

Urticaria when associated with any of the following:

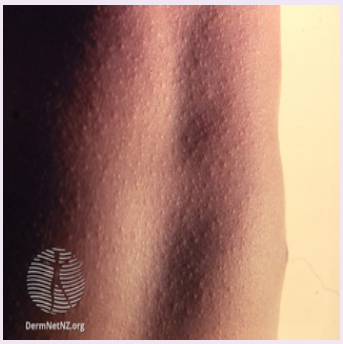
- Swelling (angioedema) to the tongue, lips or throat (child may complain of tightness)
- Difficulty breathing, stridor, cough or wheezing
- Difficulty talking, drooling or difficulty swallowing/ managing secretions
- Altered level of consciousness Pale and floppy

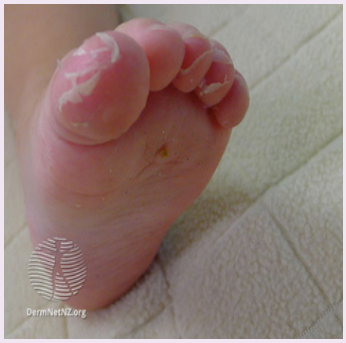
Can indicate life threatening anaphylactic shock. Anaphylaxis is a medical emergency that requires immediate medical intervention. In the event of anaphylaxis refer to the Guideline: Allergy and anaphylaxis – Emergency management in children and Skill Sheet: Adrenaline (epinephrine) in Anaphylaxis.

Paediatric Rashes of Concern (continued)

Scarlet Fever

- Children with scarlet fever often develop a diffuse rash that is pink-red, with "pinhead" spots that can feel sandpaper-like. The rash most often develops after the onset of other symptoms including fever, headache, lethargy, vomiting, abdominal pain and peeling skin (axilla, groin, fingers and/or toes).
- Scarlet fever can occur as a result of a Group A streptococci bacterial infection.
- Urgent medical review is required to assess the need for timely administration of antibiotics.





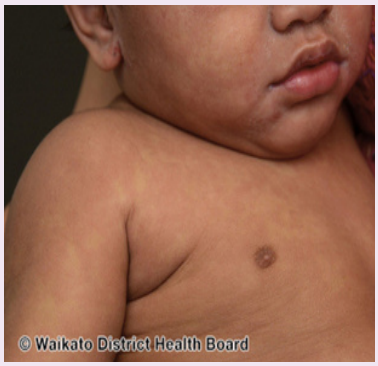
Photographs courtesy of DermNet NZ https://dermnetnz.org

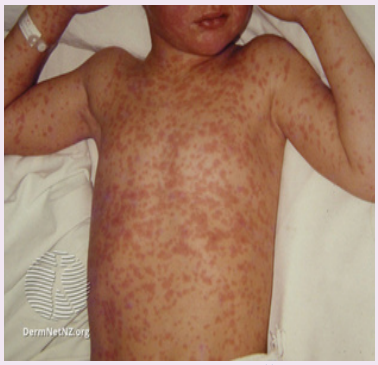
ALERT

A scarlet fever rash may indicate a serious bacterial infection. These children MUST have an urgent medical review for consideration of antibiotics for treatment.

Measles

- The measles rash, caused by the measles virus, is red, blotchy and blanching. It appears first on the face later spreading to the trunk and then generalised. It is usually accompanied by any of the following: irritability, conjunctivitis, a runny nose, a dry cough or koplik's spots (white lesions on the buccal mucosa).
- Measles is a virus that infects the respiratory tract from the paramyxovirus family. Many children in Australia are vaccinated against measles, however it is important to remember that this does not guarantee immunity. Infants will not have received their first measles vaccine (MMR) until the age of 12 months, making them particularly susceptible.
- It is important to consider potential travel that has been undertaken when risk assessing for measles.
- Measles is transmitted by the airborne route. Where measles is suspected, it is pertinent that the patient is moved into a negative pressure room with airborne precautions utilised to reduce the risk of transmission.





Photographs courtesy of DermNet NZ https://dermnetnz.org

ALERT

Measles is a highly infectious diseases spread by respiratory droplets. Suspected measles requires immediate negative pressure isolation. **Measles is a notifiable diesease.**

Paediatric Rashes of Concern (continued)

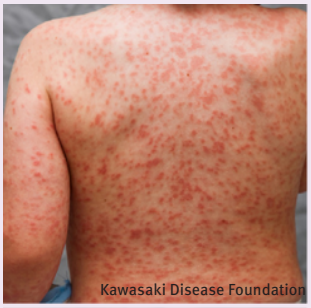
Kawasaki Disease

Children often present with fevers and irritability along with other non-specific signs and symptoms. The following physical changes are typically seen in Kawasaki disease. Not all of the following signs or symptoms may be present.

- a red, blotchy and blanching rash (trunk, limbs and nappy area)
- a 'Strawberry Tongue' - a red lumpy tongue
- dry red or cracked lips
- bloodshot eyes with no discharge
- swelling to hands and feet with redness to palms and soles. Peeling skin
- around the fingernails may occur later in the course of the illness.
- swollen neck glands

The cause of Kawasaki disease is unknown. It occurs most commonly in children under 5 years of age. It can occur in children of all ethnic origins, however it is most common in children of Asian descent.

There is a need for urgent medical review to confirm the diagnosis. This helps to ensure that treatment using intravenous immunoglobulin (IVIG) can be commenced in a timely manner.



Photographs courtesy of Kawasaki Disease Foundation

Tips

- Remember to check infants & children for rashes at triage and during initial assessment. For example, an infant or child presenting with a history of fever should be examined for the presence of a rash (particularly petechiae and purpura).
- A full inspection for rashes involves ensuring the child is fully exposed, with all surfaces inspected. This includes the face, torso, back, front and back of legs and arms, hands including palms, feet including soles, axilla, groin flexures, buttocks and mucosal surfaces.
- Infants and children can present with rashes from a variety of causes. If concerned or unsure about a particular rash, seek the advice of a senior clinician.
- Infants usually begin trialing solids such as egg and peanut butter from 4-6 months of age, which may precipitate and allergic reaction. In the event of anaphylaxis refer to the Guideline: Allergy and anaphylaxis – Emergency management in children and Skill Sheet: Adrenaline (epinephrine) in Anaphylaxis

For further information:

QPEC Guideline:	Febrile illness – Emergency management in children
QPEC Guideline:	Sepsis – Recognition and emergency management in children
QPEC Guideline:	Allergy and anaphylaxis – Emergency management in children
QPEC Video:	Rashes in Children
CHQ Guideline:	Petechiae and Purpura: Emergency Management in Children

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This Queensland Paediatric Emergency Skill Sheet was developed and revised by the Emergency Care of Children working group.
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- Providing care within the context of locally available resources, expertise, and scope of practice.
- Supporting consumer rights and informed decision making in partnership with healthcare practitioners including the right to decline intervention or ongoing management.
- Advising consumers of their choices in an environment that is culturally appropriate and which enables comfortable and confidential discussion. This includes the use of interpreter services where necessary.
- Ensuring informed consent is obtained prior to delivering care.
- Meeting all legislative requirements and professional standards.
- Applying standard precautions, and additional precautions as necessary, when delivering care.
- Documenting all care in accordance with mandatory and local requirements.

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