Disclaimer:
Treatment of skin diseases, common in developing countries, is often based on the use of simple management schemes which are easy to apply and cheap.

The protocols here were devised to provide examples of recognition and treatment schedules which meet these criteria. It is important to recognise that these are seldom supported by a strong evidence base as many of the treatments were devised and assessed many years ago. However we hope that they provide useful examples of treatment protocols that can be applied in different countries using medications that are commonly available. They are broadly based on the evidence presented in the Disease Control Priorities project (www.dcp2.org).

Management of erysipelas and cellulitis

What are erysipelas and cellulitis?

1. Causative organism: Group A Streptococci (rarely other Groups)

2. Erysipelas and cellulitis are distinguished by the depth to which they penetrate tissue. Erysipelas is restricted to the dermis and superficial layers of the skin whilst cellulitis spreads deeper into the subcutaneous tissues.

Which population is at risk?

1. Common in tropical countries .

2. Elderly and the very young are particularly at risk.

3. Entry lesions are needed for these bacteria to take effect and are seen regularly in those with chronic interdigital lesions.

4. Patients with lymphoedema - congenital or secondary to filariasis, cancer.

1. Erysipelas:

- Abrupt onset with fever and, usually, systemic disturbance such as chills;
- The skin is brownish-grey in dark-skinned people, bright red in Caucasian skin;
- A spreading, hot, tender plaque with a well-defined border. It's surface is usually shiny although vesicles and bullae may be present;
- Pain and swelling are likely to be prominent features.

2. Cellulitis:

- A low grade fever may be present with a less abrupt onset;
- The skin is brownish-black in dark skinned people, dull red in Caucasian skin;
- The border is less well defined, fades into the surrounding skin and no blisters are present;
- The skin will be swollen and hot;
- Features of both types of infection may be present. True erysipelas is likely to exist in parts of the body where there is little subcutaneous tissue e.g. the head and face.

How is diagnosis confirmed?

Clinical diagnosis is sufficient to commence treatment, cultures from skin or blood cultures are usually negative.

What might it be confused with?

Erysipelas and cellulitis are most likely to be confused with one another. However it is important to be on guard for necrotising fasciitis which may start in a similar way but the patients are sicker with generalised malaise and fever and there is often reduced sensation of overlying skin. Group A streptococci or mixed bacterial infection often in association with an infected traumatic wound or surgical wound may cause this. Surgical exploration is mandatory as this is potentially life threatening.

What preventive measures should be taken?

1. Entry lesions should be minimised by careful skin care (including washing and drying) particularly of interdigital spaces including the use of antiseptics.

2. Tinea pedis should be actively treated as this can lead to entry lesions. However remember that interdigital cracking is often bacterial in origin and antiseptics are more useful.

3. Limb movement and gentle exercise may reduce lymphoedema if present.

Which treatments are most effective?

In mild cases oral antibiotics may be sufficient but high doses of intravenous penicillin or flucloxacillin may be needed.

How should the treatments be used?

1. Patients should be advised to rest and to use cool compresses on the affected areas.

2. Medication for reducing pyrexia and pain may be needed.

3. If limbs are affected bandaging should be avoided

What are the common concurrent problems?

- Pain, lymphangitis and lymphadenitis. Recurrent attacks of cellulitis are common in patients with lymphoedema, whatever the cause, and preventive measures (see above) are appropriate . It may be necessary to maintain patients on long term oral penicillin V.

What are the uncommon concurrent problems?

- Septicaemia, glomerulonephritis, gangrene, elephantiasis and endocarditis.

What are the commonly held misconceptions about the disease?

- That fungal infections of the toe webs commonly predispose to recurrent cellulitis of the lower leg. Whilst this can occur, web lesions are more often caused by bacteria in this situation.