Clinical Network for the Treatment of Childhood Eczema

Why eczema?

Eczema (also known as atopic dermatitis) is a common inflammatory condition of the skin. Studies of the New Zealand population show eczema affects 15-20% of children.\(^1\)\(^2\) Although eczema is mainly managed in the community, it also contributes to hospitalization – with 2010/11 figures from Starship hospital showing that over 550 children admitted had eczema/dermatitis. Hospital admissions for eczema also tend to be of longer duration (3-7 days) in comparison with average length of stay. Admissions to intensive care at Starship Hospital due to eczema occur at a rate of around 1-2 per annum (D Purvis personal communication). The onset of eczema can be at any age but most often is before the age of 5 years. Eczema can be associated with other conditions such as asthma, hayfever, and food allergies.

Although eczema can have a significant impact on quality of life. This is due to it causing severe itch and discomfort, impaired sleep, inability to fully participate in school and activities, negative effects on appearance, and the significant time required for treatment. A study looking at the effect on quality of life of children with generalized eczema found that eczema was more detrimental than cystic fibrosis, asthma, renal failure and diabetes, and second only to severe cerebral palsy in the adverse effect it had on the everyday quality of life of the child and family.\(^3\)

Eczema is also associated with increased risk of skin infections. Skin with eczema produces fewer of the body’s natural antibiotic defensive proteins and has higher levels of colonization with bacteria. Superinfection with bacteria, especially Staphylococcus aureus and Streptococcus pyogenes, is one of the most common causes of flares of eczema. Eczema is a major predisposing factor in the development of skin and soft tissue infection requiring hospitalisation in New Zealand and is also a potentially modifiable risk factor for skin infection.\(^4\)

Thus eczema is a common condition affecting large numbers of New Zealand children. It has significant adverse effects on quality of life and contributes to potentially avoidable hospitalisations.

Current eczema care

Currently eczema care for children is delivered by a range of providers in a variety of settings. This includes general practitioners, primary care nurses, well child providers, pharmacists, nurse practitioners, paediatricians, dermatologists, immunologists and a range of complementary/alternative medicine practitioners. Training of these groups in the management of childhood eczema is variable in content and extent. The variety of information and advice offered can result in confusion and undermine carers confidence to use treatments appropriately. Effective management is also adversely affected by myths and misconceptions held by the community and by a range of health professionals.
Eczema care is not a simple matter of taking a tablet, but requires a holistic approach addressing avoidance of triggers, recognition and treatment of infection, use of appropriate wash products, correct application of medicated and emollient creams, and in some cases use of systemic immunosuppressants. Effective care is therefore both complex and time-consuming. Families find it challenging to be adherent with treatment regimens. It is recognised that adherence, and appropriate use of treatments, can be improved by patients and families having a good relationship with their treatment provider, clear instructions (including written information) and regular follow up.

Currently there are a number of different initiatives and resources available around the country to improve delivery of eczema care. The opportunity exists to utilize resources and knowledge gained from these at a national level to provide greater equity of access and consistency of information. Examples include:

- Eczema initiatives at Capital and Coast District Health Board (see appendix 1)
- Eczema initiatives at Northland District Health Board (see appendix 2)
- Tertiary dermatology services including combined dermatology and immunology/allergy assessment
- Written guidelines for the care of eczema eg Starship Clinical guidelines, SafeRx guidelines, BPAC guideline
- Parent written information handouts

**The Eczema Clinical Network**

The aim is to establish a national multi-disciplinary network that will support clinicians working across community, primary, secondary and tertiary services to deliver high quality, cost effective and integrated eczema treatment programmes for children, youth and their whanau. The aim of the National Child & Youth Eczema Clinical Network is to provide clinical leadership in the development and maintenance of a nationwide, clinical service for children and youth up to 18 years of age.

The Network will:

- foster a culture of a nationally coordinated child and youth eczema continuum of care
- develop a system for the monitoring and auditing of services to inform continuous quality improvement
- identify and liaise with national and international bodies with relevance to childhood eczema
- develop a model of care
- establish a workforce education and development programme
- advocate for evidence based care
- develop resources for use by clinicians

The work of the Eczema Clinical Network is consistent with the goals of the Ministry of Health:
1. Moving intervention upstream to strengthen health delivery in primary care and community settings.
2. Meeting the diversity of needs within the population by supporting local initiatives for eczema care delivery.
3. Encouraging DHBs to invest in more cost-effective models of care for eczema management.
4. Integrating health services at the primary and secondary care levels, while maintaining a patient-centred delivery model.
5. Supporting front-line innovation to develop and deliver improved models of eczema care.

The Eczema Clinical Network aims to result in measurable:

- Improved patient satisfaction with eczema care
- Reduced primary care visits for eczema
- Reduced hospitalization for eczema and complications of eczema
- Reduced referrals for secondary/tertiary care
- Reduced waiting times for those requiring secondary/tertiary care
- More appropriate use of pharmaceuticals

References

Appendix 1
An Eczema Intervention and Treatment programme was developed in the 1990’s to provide:
- education about the presenting condition
• known and possible triggers
• management/treatment with written information
• an individualised care plan
• provision of some resources to implement care

Nursing support and practical advice on how to implement care was provided through regular review of progress. Support is also provided to carers in Kohanga Reo, kindergartens, schools and other community settings if, and as, required.

The programme was initially delivered through the paediatric community nursing service; clinics were started in 2004 to improve access. Now most children and families are seen in clinics as the most effective outcomes are achieved in this setting versus inpatient care or home visiting.

As the programme developed, it became evident that with effective clinical management (practice and evidence based), morbidity (e.g. hospitalisations), exacerbations of eczema and skin infections could be significantly decreased. Parents and children reported that the impact was life changing in some instances.

Activities and outcomes of the Nurse Eczema Service for Children & Families include:

• 14 Nurse Led Eczema Clinics held monthly in Wellington and Kenepuru Hospitals
• Limited ongoing medical appointments are required and the majority of children only require an average of 1-3 (nurse) clinic appointments
• Children with recurrent skin infections (with or without eczema as comorbidity) are also seen in these clinics
• A collaborative project, developed with the Newtown Union Health Service (NUHS), has been effective so now only the most severe children need referral to the specialist nursing service
• Increased access to high heath needs areas. For example, clinics are held at Pacific Health, Strathmore and Porirua Union Health (PUHS) in Porirua East. A case management model and collaboration with a primary care and child health (secondary care) nurse is used
• Improved access is demonstrated as these practices record high clinic attendances in addition to achieving improved health gains for the children
• Establishment of strong links with Plunket, other Well Child providers, Regional Public Health and Primary Care across the CCDHB district
• Education and support (formal and informal) is increasingly sought by doctors and registered nurses from primary through to tertiary services
• A number of primary care nurses (and a few GPs) have sought further training and support to provide a service within their practices which range across the district. This prevents escalation to specialist services for some children and maintains support for families by their primary care providers
Increasing consistency in practice and prescribing across health sectors in Wellington
CCDHB service has supported the development of similar services throughout New Zealand. For example, in 2007 two other DHBs developed similar services (Northland and Hawke’s Bay) to the current expansion of nine services, provided by paediatric community nurses or clinical nurse specialists

Appendix 2
Northland DHB’s Clinical Nurse Specialist in Eczema and Allergy (Pauline Brown) has led the initiation of eczema education on the CarePlus Programme for Northland’s Manaia PHO (Wellsford North, Whangarei, Kaipara area, 21 practices and 2 Maori Organisations). The proposal for this project was readily accepted and recognized as essential to this population to improve;

- Access of care and provide education in a timely manner for the population suffering from eczema
- Empower the child and family to manage the symptoms
- Improve quality of life for the child and their family.
- Empower clinicians with knowledge on how to manage eczema
- Reduce hospital admissions for skin and infection related conditions
- Initiate a referral pathway for children requiring specialist intervention

16 practices have completed an apprentice style education programme with the nurses attending both new patient and follow up consultations at the Clinical Nurse Specialist-led clinic. This was followed by a formal tutorial session and submission of case study scenarios before certification. A teaching package was developed as a PowerPoint presentation/and or flipchart as the teaching tool for the nurses to present to their patients. As a result of this project, patients who may normally be referred to tertiary services are receiving assessment, education and follow up in a timely manner. Patients have appropriate treatments commenced prior to the referral appointment and in some cases, referrals are no longer needed. This has allowed improved access of more severe cases to tertiary level care.

As a result of this project the Te Tai Tokerau PHO also requested a similar initiative. This PHO covers Bay of Islands South to the Far North, 14 practices). Due to geographical difficulties of offering the same educational structure of the Manaia PHO project, Te Tai Tokerau employed a Nurse Practitioner to work with the Clinical Nurse Specialist in Eczema over a number of weeks and she is now providing a Nurse Led clinic and education of the Practice Nurses and GP’s using the educational tools developed. Ongoing clinical support is provided via phone or email with both the Nurse Practitioner in the north and the Practice Nurses at Manaia PHO.