Sore Throat Management – Prevention of Rheumatic Fever
Collaborative Clinical Pathway

Further Care Map Information for Health Providers

Definition [1]:
Group A Streptococcal (GAS) sore throat:
- throat infection caused specifically by Group A Streptococcal bacteria

Sore throat:
- pain or discomfort in the throat, often worse on swallowing

Pharyngitis:
- swelling and/or redness (inflammation) of the pharynx

Strep throat:
- also called streptococcal sore throat, is an infection of the throat and tonsils caused by a Streptococcal bacteria

Background:
- acute rheumatic fever (ARF) is a serious inflammatory disease which occurs in a small proportion of people (up to 3%) as a rare auto-immune consequence of untreated GAS throat infection [2, 3, 4]. It is a major cause of preventable chronic heart disease (rheumatic heart disease) in children and young people[2,6] and results in a considerable disease burden throughout adulthood [5].
- The incidence of ARF in New Zealand is much higher than in other comparable countries[3]. ARF is unevenly distributed in New Zealand – it occurs mainly in the North Island, is strongly correlated with poor socioeconomic status, and disproportionately affects Maori and Pasifika people [2,3,4,5,6]. Most cases (approximately 70%) occur in primary and intermediate school-aged children and there has been an increasing trend in the incidence of ARF nationally over recent years [2,4,6].
- There is strong scientific evidence that supports the timely use of appropriate antibiotic treatment for GAS throat infections as an effective strategy to reduce the incidence of ARF [5,7,8].

Aetiology [1]:
- most sore throats are viral in origin
- epidemiological studies show that people at higher risk of developing rheumatic fever include:
  - children and young adults aged between 3 and 35 years (rheumatic fever in NZ is rare under the age of 3 years and first episodes rarely occur over the age of 35 years)
  - people of Maori or Pasifika ethnicity (rates are approximately 5 times higher and 10 times higher respectively than rates in the non-Maori, non-Pasifika population)
  - people living in crowded circumstances or lower socioeconomic areas (both of these indicators are associated with higher incidence of rheumatic fever in NZ); household crowding can be described in two main ways:
    - structural crowding occurs when the house is too small for the number of household members
    - functional crowding occurs when there are too many people crowding into a single room to sleep (e.g. due to an inability to provide a warm house)
    - formal definitions of crowding can be complex however, in practice if more than two people share a room for sleeping then regardless of whether this is for structural or functional reasons, it can be said that household crowding is occurring
- in households with evidence of structural crowding, support may be required for families to seek alternative private, community or social housing. In households with evidence of functional overcrowding, there are a range of interventions that may assist families including insulation, curtains, mechanical ventilation, carpets, heating sources, beds/bedding, minor repairs, and support with power bills. Further information on interventions and initiatives is available [here](#).
- the Ministry of Health have produced a [toolkit](#) to assist healthcare workers to shape their conversations with families who need assistance with keeping their homes warmer and drier and prevent germs from spreading
  - GAS sore throat is the most important bacterial throat infection encountered in primary care because of the morbidity and mortality associated with the sequelae of rheumatic fever:
    - 15–30% of sore throats in children and 10% in adults are estimated to be due to GAS
  - in up to 3% of people, GAS sore throat may lead to ARF