

Serious skin infection rates double in children since 1990

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(PhysOrg.com) -- Serious skin infection rates in New Zealand children have increased markedly over the last two decades according to new research from the University of Otago, Wellington.

More than 100 [children](#) a week are now being admitted to [New Zealand](#) hospitals for treatment of skin infections with most needing [intravenous antibiotics](#) and one-third requiring surgery.

The study by Associate Professor Michael Baker, Dr Cathryn O'Sullivan and colleagues has been published in the international journal *Epidemiology and Infection*. For the first time it comprehensively details the high rate of serious skin infections amongst New Zealand children.

“It’s a distressing picture for our children,” says Associate Professor Baker. “We already had high rates of these infections compared to other similar countries. This research shows a large rise in children being admitted to hospital every year with serious skin infections like cellulitis, abscesses and impetigo.”

The fundamental finding of this new study is that serious skin infections, caused mainly by the bacteria *Staphylococcus aureus* and *Streptococcus pyogenes*, have almost doubled since 1990; from 298 cases per 100,000 to 547 cases.

There is now an average of 4,450 overnight hospital admissions a year for children 0-14 years of age, plus a further 850 children admitted as

day patients.

“This burden of disease is important for several reasons. Firstly, these infections are very distressing for the children affected. The average length of hospital stay is three to four days. Two-thirds of these children need intravenous antibiotics, and one-third need surgical drainage under general anaesthetic.”

“Secondly, these infections should be highly preventable, particularly with early primary care treatment by GPs.”

“Thirdly, skin infections are filling up hospital wards and reducing their capacity to treat other serious surgical conditions. The direct cost to DHBs is around \$15 million a year, so this is a major cost to the health system.”

The research also makes the point that serious skin infections are only the ‘tip of the iceberg’ as they do not take account of the thousands of other cases which do not result in hospitalisation. In addition to the 4,450 overnight admissions and 850 day cases admitted to hospital, an estimated 60,000 children visit GPs every year for treatment of skin infections.

Other key findings in this study are:

- Boys have a significantly greater risk of infection than girls
- Incidence is highest in pre-school children, with children under five years having more than double the rate of 5-9 year olds.
- The rate of serious infections is almost three times higher for Maori children and over four times higher for Pacific children compared with other ethnicities.

- Incidence of infection increases markedly with socio-economic deprivation. The rate for children from the most deprived areas is 4.3 times greater than those from the least deprived neighbourhoods.
- Serious skin infections are more than 1.5 times more common in urban than rural areas.
- North Island DHBs have much higher rates than South Island DHBs.

Although this study did not examine reasons for the increase in serious skin infections, some of the factors may be linked to barriers in accessing primary healthcare including cost. Factors relating to socio-economic deprivation may include access to adequate hot water for washing, diet and nutrition, and household crowding.

Associate Professor Baker says this latest study fits with previous epidemiological research by the University of Otago, Wellington which has shown a marked increase in rates of hospitalisation for infectious diseases in NZ, along with rising inequalities. However the exact causes of the increased rates are still not known. Much of these increases happened during the 1990s when income inequalities were also rising.

“There’s an urgent need for action to prevent serious skin infections in children. More research is essential so we can identify the causes of this health problem, introduce preventative measures and improve early treatment,” says Associate Professor Baker.

Provided by University of Otago

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