

Anti-cancer vaccine proves cost effective, but coverage needs improving

April 15 2014, by Tony Blakely

The New Zealand Government's investment in HPV vaccination for girls is a "good value-for-money" way to protect health, a just-published study by the University of Otago Wellington (UOW) shows.

Despite a modest 47% [coverage](#) rate (at the time of analysis) and targeting young women only, there are health benefits to both men and women from herd immunity, says Professor Tony Blakely from UOW's Burden of Disease Epidemiology, Equity and Cost effectiveness (BODE3) Programme.

The vaccination programme was introduced in 2008 and has been routinely offered through schools in year 8 or through primary care (aged 12 to 20 years) since 2011. Since then, sentinel surveillance clinics around the country (sexual health, family planning and student and youth health clinics) have reported a declining number of first presentations for genital warts, with the steepest reductions occurring in young women aged 15-19.

Pharmaceutical data for genital warts treatment also indicates a favourable downward trend.

Meanwhile, the BODE3 team has developed a model that shows the vaccination programme has a cost-effectiveness of \$18,800 per quality-adjusted life-year (QALY) gained. The rule-of-thumb is that gaining a QALY for less than a country's GDP per capita (\$45,000 for New Zealand) is cost-effective, Professor Blakely says.

"Furthermore, the current vaccination programme generates more QALYs per 12-year-old for Maori and people living in deprived areas, so is helping to reduce health inequalities," he says.

The researchers also modelled the cost-effectiveness of moving from the status quo to a more intensive school-based only programme of vaccinating [girls](#) – at 73% coverage as it is in Australia. This shift in coverage achieved more [health](#) gain and was also still cost-effective at \$34,700 per QALY.

Coverage in New Zealand is currently nudging up to about 56% (higher for Māori and Pacific), but there is scope for New Zealand to further increase its coverage to the higher rates seen in Australia and in the UK where coverage is 73% and 84%, respectively, Professor Blakely says.

Part of the problem keeping rates lower in New Zealand might be that parents are given too many options for getting free HPV vaccination, he says.

"Having the option to either have the vaccination at school or to delay a few years and get it from a GP is likely causing a lot of parents to delay. One possible way to achieve higher coverage might therefore be to have only a free school-based programme, as in Australia, with the requirement to pay the full market price in other settings."

An additional approach is to enrich the information to school girls and parents about the vaccination.

"Our view is that greater emphasis could be given to explain that it will protect against multiple other cancers that affect both men and women, and that it is best given well before the typical age of sexual debut to maximise its benefit."

Options could also be explored for boosting the cost-effectiveness of the vaccination even further, for example through delivery to girls at the same time that the current diphtheria/tetanus/pertussis boost is given to 11-year-olds at school, Professor Blakely says.

More information: The complete study is available online:
www.otago.ac.nz/wellington/otago068857.pdf

Provided by University of Otago

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