Modelling HPV prevention and cervical screening

Speakers: Karen Canfell, Megan Smith, Kate Simms, and Michael Caruana
Venue: Room 305, Samuels building, UNSW upper campus, Randwick
Date: Thursday 25 September 2014
Time: 12-1pm
Enquiries: bayzid@unsw.edu.au
Parking: Level 5 of the parking station; enter via Gate 11 Botany St, Randwick

BIOGRAPHY OF THE SPEAKERS

Associate Professor Karen Canfell leads the Cancer Screening Group at the Lowy Cancer Research Centre UNSW. The group are involved in a number of projects in prevention of cervical, colorectal and other cancers. She holds a D.Phil. from the University of Oxford and an NHMRC Career Development Fellowship, and she has held a number of competitive NHMRC grants and government consulting contracts. A focus of Karen's research concerns the interplay between HPV vaccination and cervical screening, both in developed countries and in lower resource settings.

Ms Megan Smith has completed an MPH at the University of Sydney with a focus on cancer control, biostatistics, epidemiology, vaccines, and health economics. She has been involved in the management of various government-sponsored evaluation projects, including evaluations performed on behalf of the Australian Medical Services Advisory Committee (MSAC), the UK National Health Service (NHS), and the New Zealand Ministry of Health. Megan is closely involved in providing Independent Monitoring Reports for the National Cervical Screening Program in New Zealand, involving analysis of large datasets.

Dr Kate Simms received her PhD in applied mathematics from the University of Adelaide in 2012 with a Dean's commendation award for outstanding thesis. She has been working on evaluating the cost-effectiveness of different screening programs in developing countries such as England, Australia and New Zealand. She was co-first author of the Economic Modelling of the Renewal of the National Cervical Screening Program report, which
evaluated the safety and effectiveness of the current Australian cervical screening program, and compared the cost-effectiveness with a range of proposed screening strategies.

Dr Michael Caruana obtained a D.Phil. in mathematics from the University of Oxford in 2008. His research interests include the development of mathematical models that effectively simulate and describe complex health systems, efficient model calibration methods, stochastic analysis and rough path theory. Michael is currently working on extending the model used to evaluate the outcomes and cost-effectiveness of various cervical screening strategies.

**ABSTRACT**

We provide a short overview of a comprehensive HPV and cervical cancer model platform (POLICY1) that has been used to perform multiple evaluations of HPV and cervical screening, including evaluations for national reviews of cervical screening in Australia, England and New Zealand. We will provide three short case studies to illustrate some different applications of the platform. Megan Smith will discuss the impact of heterogeneity on estimates of the effect of male HPV vaccination. Kate Simms will discuss an evaluation of the optimal age of ceasing cervical screening. Finally, Michael Caruana will show how the model of cervical screening in Australia was harnessed to inform sample size calculations for a major randomised controlled trial of primary HPV vs. Cytology testing in Australia ('Compass') which will involve 108,000 women.

**Next seminar**

9 October, Room 305 of Samuels Building

Speaker: TBA

Topic: TBA