Recent change in pneumococcal vaccination status of older people

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Before April 2011, all patients aged 65 years were eligible to receive a pneumococcal vaccination and a second vaccination at 70 years of age through the National Immunisation Program (NIP). In April 2011 the Therapeutic Goods Administration advised health professionals not to provide patients with a second dose of pneumococcal vaccine\(^1\). In January 2012, after a review\(^2\), the TGA retracted the advice to not administer. However, the second dose was then only funded under the NIP for patients with a pneumococcal risk factor (additional to being aged 65 years or older, e.g. diabetes, chronic lung disease).

Patients aged 70 years or older would be most affected by this change in policy as they would be up for their second dose, their first dose having been five years prior, when they were 65.

We hypothesised that between 2011 and 2012:

• there would be a reduction in the proportion of patients aged 70 years or older without a risk factor, who had received a second vaccination.
• there would be no significant change in the proportion of patients aged 70 years or older with a risk factor, who had received a second vaccination.

Method: We reanalysed data from two sub-studies of the BEACH program\(^3\) in which the GP specified the pneumococcal vaccination status of each patient. The first sub-study (pre-measure) was conducted during March–May 2011\(^4\) and the second (post-measure) was conducted during March–May 2012 (Abstract to be published in the 2012–13 BEACH annual report).

The investigation was limited to patients aged 70 years and over. Vaccination status was determined by whether or not the patient had been vaccinated against pneumococcal disease in the previous five years. Presence of a pneumococcal risk factor(s) was defined as presence of one or more of the following: diabetes; chronic lung disease; immune deficiency; heart disease; were a tobacco smoker; or were an Indigenous patient. Due to the cluster design of the BEACH study, a simple logistic regression analysis was undertaken in SAS 9.3 using the survey procedure to account for the cluster effect. A logistic regression was possible due to the dichotomous nature of the outcome (patient was either vaccinated or not-vaccinated).

Results: In the 2011 study there were 602 patients aged 70 years or older, 300 (49.8%) with a pneumococcal risk factor and 302 without. In the 2012 study there were 617 patients aged 70 years or older, 323 (52.4%) with a pneumococcal risk factor and 294 without. As hypothesised, there was a significant decrease in the proportion of patients (70+ years) without a risk factor who had been vaccinated in the previous five years from 81.2% to 65.0% (\(p<0.01\)). However, there was also a significant decrease in the proportion of patients (70+ years) with a risk factor, who had been vaccinated in the previous five years from 83.9% to 71.7% (\(p<0.01\)).

Discussion
These results suggest that, as hypothesised, the change in policy led to a decrease in the vaccination coverage in patients aged 70+ years without a risk factor. This was expected as the removal of coverage for a second vaccination under the NIP for these people meant they were less likely to receive one.
However, changes in policy between study periods appears to have also led to lower vaccination coverage in patients who should have had a second vaccination (those aged 70+ years with a risk factor).

A third study on this topic is planned for March–April 2013 to see if the decrease in vaccination coverage of at-risk patients persists. If it returns to 2011 levels, this would suggest the drop in vaccination rates in 2012 was due to people who were meant to receive their second dose during the suspension, had not received it in the four months after the suspension was lifted (when our second study was conducted), but had received it by the time we surveyed them again a year later. However, if the measured decrease persists, it probably means that the changes in NIP funding have adversely affected coverage rates of at risk patients.

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References


