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Improving childhood immunisation coverage rates

Evaluation of a divisional program

Background

In contrast to generally high childhood immunisation coverage rates across Australia, general practices in central Sydney (New South Wales) have a below average coverage rate. To address this, Central Sydney GP Network undertook a project that involved visiting practices with less than 90% coverage and provided guidance and support to increase coverage.

Methods

The intervention was evaluated using quantitative and qualitative methods. The quantitative component analysed practice coverage rate data from the Australian Childhood Immunisation Register. The qualitative component included semistructured interviews with general practitioners and practice staff.

Results

Quantitative analysis showed that rates for a number of practices with initial coverage between 80–90% increased to more than 90% during the intervention. The qualitative component highlighted patient and practice related issues around coverage and reporting.

Discussion

Many practice related coverage and reporting issues were identified; the majority are modifiable and thus practices can be targeted to improve coverage. However, some patient related issues are complex and not easily addressed.

■ **Childhood immunisation programs currently save 3 million lives per year throughout the world and are one of the most cost effective public health interventions.^{1,2} Before implementation of the Immunise Australia Program and the General Practice Immunisation Incentives (GPII) scheme, rates of immunisation in Australia were considered to be too low to prevent transmission of some vaccine preventable diseases.^{3,4} Since commencement of these initiatives, average practice immunisation coverage rates have increased to more than 90%.⁵**

Nonetheless, due to a range of practice and patient related issues, general practices are frequently unaware of and/or are unable to make use of resources that can assist in reporting immunisations and recalling overdue children. In August 2007, only 85.3% of children under 7 years of age in the former Central Sydney GP Division (now Central Sydney General Practice Network – CSGPN) were reported as being fully immunised.⁶ These low immunisation rates highlighted the need for practices in CSGPN to be provided with support and practical help to improve their coverage rates to at least 90%.

In order to achieve this, CSGPN partnered with The University of Sydney (New South Wales) to develop an intervention project, 'Go for 90! Partnerships to improve childhood immunisation coverage rates in general practice'. The intervention focused on the need for up-to-date, accurate and reported childhood immunisation data in general practices. The funding for this project came from the Australian Government Department of Health and Ageing (DoHA) core funding of the divisional immunisation program.

The intervention

The intervention involved a project officer visiting practices with less than 90% childhood immunisation coverage rates. At the visits, GPs and practice staff were informed about and trained to utilise a systematic approach to immunisation reporting and recalling of overdue children. This approach involved education in the use of the GPII020A report

to update immunisation records. If the practice was not receiving the GPII020A report, the general practitioners or practice staff were encouraged to request it, and were assisted with the paperwork where necessary (available at www.medicareaustralia.gov.au/provider/pubs/forms/files/gp-immunisation-incentives-practice-report-request-gpii02a.pdf). Practices were regarded as having received the intervention if there had been two or more contacts with the practice (either GP or practice staff) in which at least one contact was through a face-to-face visit to the practice. Evaluation of the project involved examining both the process and impact of the intervention.

Methods

Evaluation of the project was done in collaboration with researchers at the University of New South Wales School of Public Health and Community Medicine. Ethics approval for the evaluation was obtained from the Human Research Ethics Advisory Panel at the University of New South Wales. The process and outcome evaluation consisted of quantitative and qualitative components. The evaluation was funded by General Practice NSW (GP NSW), which covered the salary of the primary evaluator (HA) and the cost of conducting and transcribing interviews.

Quantitative component

The quantitative component involved analysing the practice coverage rate data before and after the intervention project. This data is available from the Australian Childhood Immunisation Register (ACIR) GPII032A quarterly reports.

Qualitative component

This investigated the impact of the pilot project on knowledge, skills and behaviour of GPs and practice staff. It consisted of conducting semistructured interviews with selected GPs and practice staff (practice nurse, practice manager or receptionist). A purposive sample of eight practices in four geographical areas of CSGPN were approached to take part in the interviews (this was to ensure participation from different areas of the division to include variety in the study). Two practices were selected in each area: one with a practice nurse and the other without. In practices with a practice nurse, one GP and one practice staff member, who was responsible for reporting the immunisations, was interviewed. In practices without a practice nurse only the GP was interviewed. The CSGPN immunisation project officer and the immunisation intervention officer were also interviewed as part of this component.

Interviews were audiorecorded with verbal consent from participants and professionally transcribed. Thematic analysis of semistructured interviews was undertaken. Interview themes were summarised by the primary evaluator and discussed with the other authors.

Results

There were 42 practices with immunisation rates of less than 90% targeted for intervention. Of these, 24 practices received intervention visits between December 2007 and May 2008.

Findings from the quantitative analysis

Quantitative analysis was conducted for the period August 2007 to May 2008, which covered four GPII032A reports. *Figure 1* shows the coverage rates of the 24 practices that received intervention as part of this project. It highlights the proportion of practices with coverage rates above 90%, which increased markedly from 30.4% in August 2007 to 68.2% in May 2008. There was a steep rise in the coverage rates of these practices between February 2008 and May 2008 as the outcomes of intervention became more apparent in this period. The data does not allow for whether the improvement in coverage was due to reporting of previously given immunisations or catch up immunisations. The proportion of practices with coverage rates of 80–85% and 85–90%, decreased from 21.7% in August 2007 to 4.2% in May 2008, and 43.5% in August 2007 to 20.8% in May 2008 respectively. This illustrates that the intervention was associated with an increase in the coverage rates of practices previously 80–90% to more than 90%.

Findings from the qualitative analysis

Issues around coverage rates

Participants were of the opinion that low immunisation coverage rates of the central Sydney area were associated with both patient and practice related issues. Examples of patient issues are: a substantial transient population, 'doctor shopping' where people do not regularly attend only one practice, and communication and language barriers related to the culturally and linguistically diverse population of the area.

'I think probably our biggest difficulty would be the fact that we have quite a lot of transient patients, so patients come and go'. GP

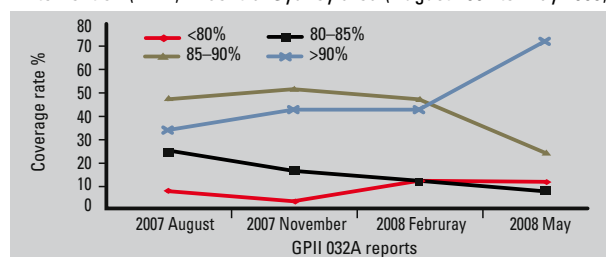
Examples of practice related issues are: limited capacity in the practice to manage the recalls/reminders and immunisation reporting, rapid turnover of staff and related loss of skills, perceived insufficient financial incentive for the work of immunisation reporting and associated lack of motivation.

'We also have a relatively high turnover of administrative staff/receptionists. So each time we get somebody new we have to train them in what to do'. GP

Issues around reporting

Commenting on the ACIR's overdue notification system, GPs and practice staff reported that even after families move, the names of their children continue to appear on the GPII020A report for years and practices can't change this as patients are no longer contactable.

Figure 1. Immunisation coverage rates of practices that received intervention (n=24) in central Sydney area (August 2007 to May 2008)



'Why does it stay in our name if they didn't come for 10 years? Seven years, 5 years. Should be a limit. Two years they didn't come, should be off our list'. GP

However, this is a false impression as the child's name is taken off the GPII020A report after two Medicare billed visits, which may take up to 15 months. In addition, there are also misconceptions held by GPs and practice staff about the activation of online reporting of immunisations. Many practices have the appropriate software but seem to have the impression that they have to purchase it separately. (Online reporting can be done at the Medicare Health Professional Online Services website at www.medicareaustralia.gov.au/hpos/index.jsp).

Response to the project

Developing personal contacts and building rapport with the practice staff was viewed as key to the success of such an intervention. Flexibility and accessibility on the part of division staff is also very important. These aspects of the intervention were appreciated by the practices and assisted in achieving the desired results.

'It was good to know that something exists which can help you out with the reporting'. PN

'I tried to oversee it and do it myself but it was just too much time and effort involved and I didn't have the time for it... our practice nurse spent a lot of time doing it but with a lot of assistance from the division which just made it a lot easier'. GP

Suggestions for improving coverage

Practice staff interviewed had a range of suggestions on how the issue of low coverage could be addressed.

Educating parents in preschools or meeting women in maternity wards could help to improve immunisation coverage. This could be the role of the area health service immunisation coordinator.

'It could be a good idea to start something in hospital maternity wards like giving information to new mothers'. PN

Periodical follow up visits to practices should be conducted by the division staff to keep them up-to-date.

'I think that if you remind me that my percentage of immunisation is dropped a bit then it would give me a shock and say I've been slack and I have to do something...'. GP

'... you know probably once a year it'd be beneficial... the person involved from the division to come out and sit down with our practice nurse for an hour and just run through and ensure that we're still chasing and still following the procedures... a recall I guess or a reminder'. GP

Workshops/short courses should be arranged to train practice staff regarding various aspects related to immunisation.

'We feel that it would be good to have training sessions on online notifications so that we could do... do it through e-claims which we're not able to do yet, so that would be useful'. GP

Discussion and recommendations

The intervention was associated with improved immunisation coverage

rates in the practices visited and feedback from the semistructured interviews showed that practice staff thought the assistance was helpful. Many practice related issues identified in this evaluation are modifiable and thus practices can be targeted to improve immunisation coverage. However, there are some practices that do not respond to current incentives and interventions. Further targeted interventions are required to improve coverage rates of these practices. Additionally, it should be recognised that some patient related issues are complex and not easily able to be addressed at the division level. There are however a number of valuable findings that will assist divisions in designing and delivering immunisation programs:

- For the intervention to be effective, support from the GP or practice manager is crucial in gaining cooperation from the practice staff. Hence, the focus of initial contact from the division should be the GP or practice manager
- Regular practice visits should be arranged by divisions in such a way that they take place within a month after the release of the GPII020A report
- There is a need for divisions to encourage and guide the implementation of a more systematic and integrated approach to enable transfer of knowledge at the practice staff level, especially when new staff are recruited. This would reduce the risk of skill loss following staff turnover, thus enabling immunisation recording, reporting and recalling processes to be streamlined and subsequent improvements in immunisation coverage to be maintained
- At a division level, collaboration with universities and employment of public health students can prove to be beneficial, as this strategy can lead to increased divisional workforce capacity.

(Note: a detailed report of evaluation is available at CSGPN http://csgpn.org.au/ee/images/uploads/immunisation/CSGPN_Pilot_Project_Evaluation_Report_FINAL.pdf.)

Conflict of interest: none declared.

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