

Background

In 2012/2013, British Columbia (BC) introduced the BC Influenza Prevention Policy requiring healthcare workers (HCW) to be vaccinated against influenza or wear a mask in patient care areas during the influenza season. The policy was the first province-wide condition-of-service policy of its kind in Canada.

Vaccinate or mask policies in Canada have been effective at increasing vaccination rates among HCW and reducing absenteeism. (1,2)

There is less literature about the implementation of such policies. (3) This study describes HCWs' and managers' experiences of policy implementation during the fourth policy season (2015/16).

Objectives

- To quantitatively describe policy planning and implementation activities at the health care facility level for the 2015/16 influenza season in BC.
- To identify factors and activities that support successful implementation of the policy at the healthcare facility level.
- To identify challenges and barriers associated with implementing the policy at the healthcare facility level.

Methods

Study design

We conducted a cross-sectional study of British Columbia health authority employees who worked during the 2015/16 influenza season (Dec 1, 2015 through Apr 15, 2016).

Invitations containing a link to an online survey were sent to all-staff email distribution lists in April-May of 2016.

A de-identified extract from the Workplace Health Indicator Tracking and Evaluation (WHITE) database was obtained to describe the BC HCW population eligible to complete the survey.

Analysis

Responses from non-employees were excluded. Incomplete survey responses were included in analysis if respondents had provided their 2015/16 immunization status.

To assess the representativeness of the survey sample, we compared the distribution of demographic variables and influenza vaccination status among survey respondents to the corresponding information available from WHITE.

Respondents who identified as managers or supervisors responsible for monitoring policy compliance among their staff were asked an extra set of questions pertaining to implementation of the policy.

Knowledge and attitude questions were dichotomized from a 5-point Likert scale for descriptive and univariate analyses.

All data management and analyses were performed in StataSE 14.

Figure 1. Influenza self-reporting site for BC health care workers

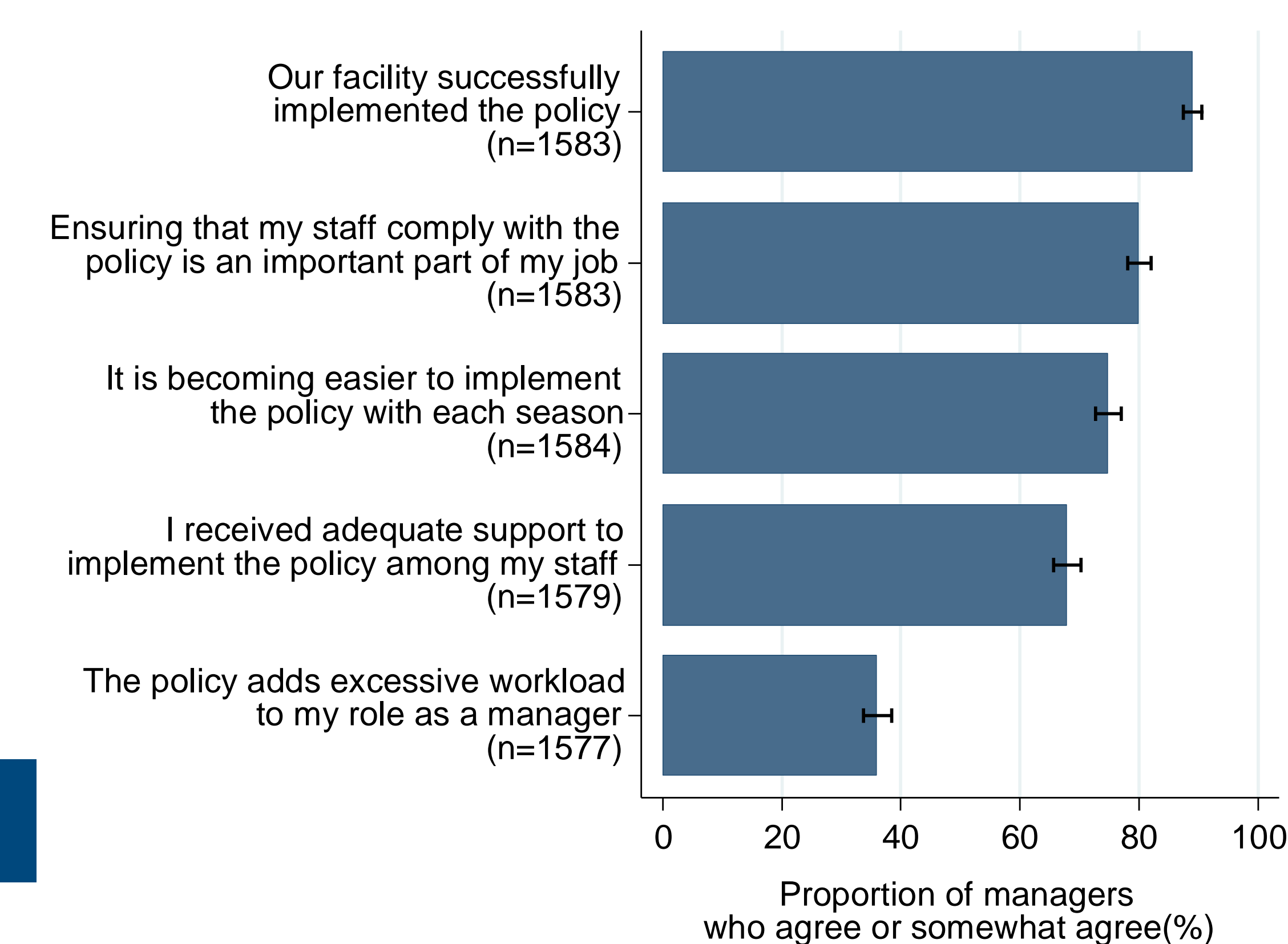
The screenshot shows the 'Influenza Self-Reporting' website interface. It includes a header with logos for BCCHS, Fraser Health, Inuvik Health, Island Health, Northern Health, Providence Health Care, Provincial Health Services Authority, Vancouver Coastal Health, and BCCSS. The main form is titled 'Employee Information' and contains fields for First Name, Last Name, Date of Birth (with a date picker), Home Postal Code (with an ATIA TAI dropdown), Phone Number (with a 555-555-5555 placeholder), and Email. Below these fields is a dropdown for 'Select Health Authority Employer' and an 'Employee Number' field. At the bottom, there are two radio button options: 'I certify that I have received my influenza vaccine.' and 'I certify that I am declining vaccination and will wear a mask in patient care areas for the duration of the influenza season.'

Support tools for managers from the Ministry of Health:



- Manager Checklist
- Frequently Asked Questions:
 - Influenza Vaccine
 - Masking
 - Visitors
 - Contractors & Health Service Providers
 - Managers
 - Volunteers
- Guidelines for responding to employee non-compliance (authored by the Health Employers' Association of BC)

Figure 3. Managers' perspectives on the implementation of the policy



Results

Survey response

- 18,579 eligible responses
- Response rate: 10 to 18% of BC HCW (estimated)
- Response rates ranged from 6% to 36% across health authorities
- Respondents were comparable to the overall BC HCW population in age, health authority, occupational group, and influenza vaccination status. Casual employees were underrepresented.
- 1,700 (9%) of responses were from managers responsible for monitoring policy compliance among their staff.
- Manager respondents worked in acute care facilities (47%), offices (14%), residential care facilities (13%) and other settings (27%).

Access to vaccine at work

- 89% of respondents found access to the vaccine at work convenient.
- Convenient access to vaccine at work was significantly associated with being vaccinated (χ^2 : 291, $p < 0.001$). Of those who found vaccination at work convenient (16,543), 86% were vaccinated, vs. 71% of those who did not (2,006).

Availability of masks in patient care areas

- Of unvaccinated staff who work in patient care areas, 57% reported that patient care areas were clearly marked and 63% reported that masks were always available in patient care areas.

Communication

- The most useful ways the policy was communicated to staff included emails from their manager (65%), emails from senior leadership (54%), electronic newsletters (43%) and posters or signs (43%).

Self-reporting vaccination status

- 90% of respondents self-reported their policy compliance status using the online self-reporting system.
- 97% of those who self-reported found the self-reporting system easy.
- Of those who did not self-report, 36% did not know about the self-reporting system, 27% responded 'don't know or no opinion.'

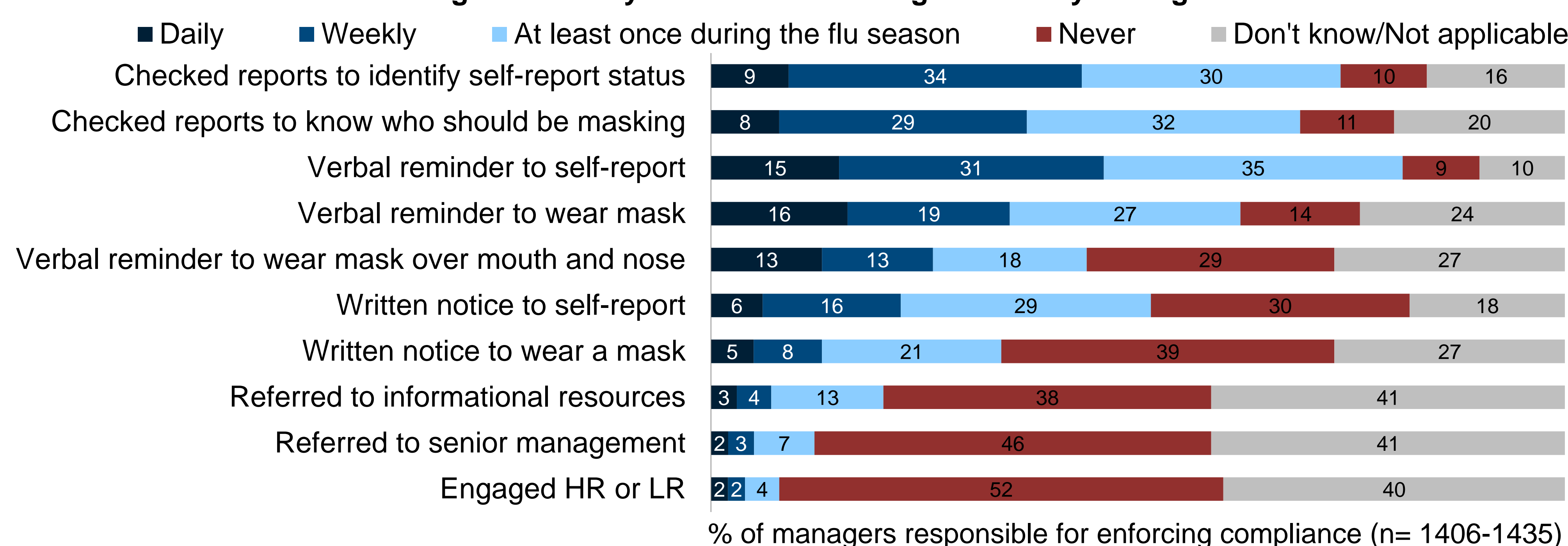
Support for managers

- Managers responded that the following groups were most supportive in implementing the policy:
 - Their manager or supervisor (73%)
 - Senior management of their facility (70%)
 - CEO of their health authority (70%)
 - Infection prevention and control (68%)
 - Occupational health and safety (58%)

Information gaps for managers

- 92% of managers agreed that the goals of the policy were clearly articulated, however, managers were not provided sufficient information about the following:
 - How to answer questions about vaccine strain mismatch (56%)
 - How to enact disciplinary measures for non-compliance (45%)
 - How to address non-compliance with masking (39%)

Figure 2. Policy enforcement strategies used by managers



Conclusions

Managers report that the Influenza Prevention Policy is becoming easier to implement with each season. Successful policy implementation continues to be reliant on vaccine and mask accessibility, clear communications to staff and managers, and managers' efforts to monitor and enforce compliance.

The majority of managers agree that their facility is successfully implementing the policy and that ensuring compliance with the policy is an important part of their job. This study enumerated the burden on managers of enforcing the policy. Progressive disciplinary measures to enforce self-reporting and mask-wearing were uncommonly used.

Findings may be relevant to other Canadian jurisdictions considering implementing similar policies.

References

- Vogel L. Vaccinate or mask pays off. *Can Med Assoc J.* 2015 Jan 6;187(1):19.
- Van Buynder PG, Konrad S, Kersteins F, Preston E, Brown PD, Keen D, Murray NJ. Healthcare worker influenza immunization vaccinate or mask policy: strategies for cost effective implementation and subsequent reductions in staff absenteeism due to illness. *Vaccine.* 2015 Mar 24;33(13):1625-8.
- Gruben V, Siemieniuk RA, McGeer A. Health care workers, mandatory influenza vaccination policies and the law. *Can Med Assoc J.* 2014;186(14):1076-1081.

Acknowledgements

Funding provided by Michael Smith Foundation for Health Research.