

RESEARCH PAPER



Examination of the British Columbia influenza prevention policy for healthcare workers: Phase 1 qualitative case study

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ABSTRACT

In August 2012, British Columbia became the first Canadian province to implement a province-wide Influenza Prevention Policy requiring all healthcare workers (HCWs) in residential and acute care facilities to either be immunized against influenza, or wear masks in patient care areas during the influenza season. This qualitative case study sought to understand the key facilitators and barriers involved in developing and implementing British Columbia's Influenza Prevention Policy. An explanatory qualitative case study approach was selected for this project. Data were collected through the review of 110 documents (policy and planning documents, implementation tools, press releases, communication materials, etc.), and through 7 focus groups with policy implementation team members ($n = 48$). Focus group interview transcripts were analyzed using Framework Analysis methods, and Prior's approach guided document analysis. Four themes were identified: (1) Clashing paradigms, (2) Policy implementation gaps, (3) Pathways of power, and (4) Personal impacts. Issues embedded in macro-, meso-, and micro-level contexts, and planning across the province, were identified as critical to policy implementation. A province-wide approach with senior-level engagement and dedicated resources is critical in a province-wide influenza prevention policy for HCW. Recommendations to improve large-scale implementation of condition-of-service influenza policies include: engaging stakeholders early, considering the complexity of political contexts, allotting time to plan appropriately, developing 'enforcement' plans, and providing education and skills to frontline providers.

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Introduction

Despite the National Advisory Committee on Immunization (NACI) recommendation that healthcare workers (HCWs) be immunized against influenza for their own protection as well as the protection of high-risk individuals with whom they have regular contact,¹ HCW influenza immunization coverage in North America remains suboptimal.^{2–7} Results from the 2014 Canadian adult National Immunization Coverage (aNIC) survey revealed that among a sample of healthcare personnel ($n = 565$), coverage for the influenza vaccine was 69.2%, and among those in close contact with patients or residents ($n = 394$), coverage was 75.9%.⁸ Although there is evidence supporting annual influenza immunization for HCWs, immunization is generally voluntary in Canada. Voluntary immunization programs have resulted in HCW immunization coverage of $\leq 75\%$ across Canada, the United States, and France.^{9–17}

Many healthcare organizations in the United States (U.S.) have introduced policies requiring HCW influenza immunization. In 2005, Virginia Mason Medical Centre in Seattle, WA became the first organization to implement this strategy, increasing coverage from 30–54% to 97% in the first year, with sustained rates of $>98\%$ over the subsequent five years.¹⁸ Other organizations in the U.S. have achieved similar results, demonstrating that this is a feasible and sustainable approach to improve HCW influenza immunization coverage.^{15,19} According to the American Academy of Pediatrics, mandating influenza immunization is the only way to sustain high immunization rates in health care settings. They argued that, to be successful, a mandatory policy must (a) be supported by all healthcare leadership, (b) include program details that are communicated clearly, (c) be tailored to each institution uniquely, (d) be universal with defined acceptable exceptions

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and a clear institutional policy for management of exempt employees, and (e) include free and available vaccinations in convenient locations and times for HCWs.²⁰

In Canada, healthcare delivery is the responsibility of the provinces, each of which manages a single payer system. Healthcare is delivered in a fully unionized environment, with several unions representing different categories of workers. In 2012, British Columbia (BC) became the first jurisdiction in Canada to implement a province-wide HCW influenza vaccine-or-mask condition-of-service policy. We report on the findings of an explanatory case study examining the BC policy implementation. The primary research questions were: How does one implement a province-wide condition-of-service HCW influenza prevention policy? And what were the key facilitators and barriers for policy implementation?

Results

A sample of 48 participants, and 110 key documents was achieved. The focus groups of BC senior policy implementation teams included participants representing 10 different categories of professions across health system roles (e.g., registered nurses, physicians, and pharmacists in managerial, occupational health and safety officer, and public health officer roles). Membership of the seven implementation teams was public and the teams were small so participant demographic details are not reported here in order to protect participant identities. Key documents including policy and planning documents (e.g., the original detailed policy document, arbitration report), implementation tools (e.g., stickers, lapel buttons, posters, pamphlets), press releases (e.g., government releases, union releases), and other communication materials (e.g., online blogs, websites, newspaper articles) recommended by focus group participants, were retrieved and analyzed. Four themes were identified: (1) Clashing paradigms, (2) Policy implementation gaps, (3) Pathways of power, and (4) Personal impacts.

Clashing paradigms

Participants described a paradigmatic clash between traditional public health and acute care cultures, which they believed negatively impacted early policy implementation. The challenge of integrating public health perspectives into other clinical settings was identified primarily by some acute care leaders who suggested the provincial leadership team lacked sufficient acute care representation to balance the public health perspective. Participants expressed concern that public health leaders did not appreciate the operational context of acute care and the challenges of incorporating the policy into different practice settings:

The provincial team had too much of a public health outlook...I don't think they considered the issues affecting operations and unions because they didn't have enough of that kind of expertise. [Participant #7]

A second paradigmatic clash surfaced between the unions protecting HCWs' safety, privacy, and autonomy; and the policy, which focused on patient safety above all. The chief foci of

the unions were HCW protection, emphasizing privacy, and the right to make personal decisions:

Nurses who are not vaccinated have the right to refuse to wear a mask or a sticker indicating vaccination status without being subject to discipline. [The union] will support all members who choose to exercise those rights. [Document 3.11]

Despite the identified clashes, planning across the province was generally highly collaborative across all implementation teams, fostering new interprofessional and cross-sectoral partnerships as they shared resources, such as communication strategies. This collaboration was identified as a critical facilitating factor in policy implementation:

The collaboration provincially was really positive... it wasn't us against them [i.e., the provincial implementation team]... I certainly saw the commitment and resources for this from the senior executive team for our health authority. [Participant #27]

Policy implementation gaps

Policy implementation gaps refer to gaps between the intended policy at one level and the actual implementation at another.³¹ Although the province-wide implementation plan was a strength, since each health authority and their policies were structured differently, there were gaps between the intent of the policy from the province-wide leadership team and local implementation, including gaps in policy processes and policy content. Each organization adapted the province-wide policy to include site-specific contextual implementation details, such as operational definitions and processes, which created barriers to implementation:

I think definition of the 'patient care area' seemed to be vague in certain areas... in the hospital setting people kind of interpreted it their own way. [Participant #16]

Stickers identifying vaccination status were not enforced uniformly across all health professions:

First we were told that we could ask the physicians for proof and then it came out that we could just take their word...trust that they would tell the truth. It just became a joke amongst the staff. We had to wear stickers, but they [physicians] didn't have to have stickers...everybody just wants it to be equal. [Participant #21]

The rapid policy introduction timeline contributed to the gaps, such as the development of tools and resources to support local managers, and the ability to recruit/certify for rapidly expanding peer immunization clinics:

Our health authorities weren't quite up to speed on the immunization competencies...need to complete this before they can actually be considered and release vaccine. But we were under the gun... [Participant #34]

Participants also identified groups they believed had not been adequately consulted during policy planning, such as direct care nurses and unions, which some connected to the abbreviated policy implementation timeline:

For policies to be successful they should involve all HCWs and they should allow time for [a] participatory system, whereby policy makers plan with the people rather than for the people...[Document 3.14]

Efforts to rectify this lack of early consultation resulted in some communication gaps as a barrier to policy implementation. For example, provincial government communications sometimes went to unions *before* the planning teams:

There were times where decisions were being made...such as the abeyance...health authorities found out long after they had had conversations with the unions...it tended to build animosity between the two, and we should have been partners all across the board. [Participant #9]

The introduction of the new influenza control policy had a ‘ripple effect’ on existing policies, necessitating the development of policy amendments, procedural changes, or new policies to fill the developing gaps. Participant data indicated that more time to plan systematically could have helped identify and mitigate these gaps. For example, implementation leaders were challenged in defining policy accommodations for individuals who could not receive the influenza vaccine or wear a mask for health or other reasons:

The policy impacted other policy that we have for influenza– the employee exclusion policy. All of that stuff takes lots of time and planning to be able to think systematically about it, because it has a ripple effect on many other systems. [Participant #21]

Pathways of power

Pathways of power represent the ways that power was overtly exerted during policy implementation and how this dynamic impacted other implementation issues, resulting primarily in barriers to implementation. We identified three major groups of ‘powerbrokers,’ in addition to negative power language and processes embedded in the policy.

Powerbrokers

Ministry of Health. The province-wide mandate offered credibility and clout, which supported policy implementation. However, the Ministry did not announce the implementation until August 2012 for the 2012–13 influenza season; this was perceived by many implementation team leaders as a unilateral government decision. The Ministry also exerted unilateral power when it announced the policy ‘enforcement abeyance’ (a temporary cessation of disciplinary action against non-compliant HCWs, and replacement with education and awareness to improve compliance), on November 30, 2012 [Documents 1.5, 3.2]. This event was identified as a clear barrier in the policy implementation process. Some participants reported that the government’s approach verged on interference and micromanagement, turning the policy into a political debate:

Politics overshadowed the execution of this fundamentally core principle around immunization for HCWs. The politics got in the way. [Participant #40]

Physicians. Non-physician participants frequently identified physician response as challenging during policy implementation. It was unclear how the physician group was engaged in planning for the policy, beyond medical health officers. Participants commented that some physicians took issue with the ‘enforcement’ nature of the policy; some openly resisted the

policy and questioned the evidence for policy effectiveness, particularly in acute care facilities:

There was so much emotion in [response to the] enforcing that people reacted – physicians that I know that if you had the rational conversation with them would absolutely agree it was the right thing to do. Get the flu shot. In fact, I had physicians say, I always get my flu shot, and I disagree with this policy. I’m not going to. [Participant #42]

Participants also explicitly referred to many physicians as engaging in a ‘power play’ when some threatened to withdraw their services if vaccination was required:

There may only be one ... [medicine specialty]... if that person decided not to be either vaccinated or masked that would leave them without that very special scarce resource for the entire province. [Participant #22]

The lack of physician support was especially undermining since they held leadership power as role models:

Physicians have a powerful voice in this setting and their ambivalence serves to generate more confusion. [Participant #12]

Unions. The lack of union consultation was a clear barrier during early policy development:

On a provincial level we talk a lot about making sure you have the union support to move forward and that’s a lesson learned for other jurisdictions looking to implement. [Participant #28]

Union push-back on the policy played out in the context of collective bargaining. At the time, unions representing HCWs were in the process of collective negotiation, and some exercised their power by publicly denouncing the policy and filing grievances [Documents 1.10, 3.7–3.12].

The policy was a focal point for push-back:

I think it [collective bargaining] creates an opportunity for people to push against the policy that has nothing to do with the policy. [Participant #17]

Some participants suggested that the policy timing was a leadership decision-making flaw:

They [the government] didn’t actually fully understand the implications of implementing a policy in a highly unionized environment at a very volatile time in the political cycle in the collective agreement negotiation. [Participant # 33]

Following the abeyance announcement, a new narrative emerged emphasizing the government’s intended collaboration between policy makers and unions:

... the Ministry is ready to work together with unions, nurses and other HCWs and their employers on a joint strategy to determine the best way to increase vaccination rates and minimize the spread of influenza in healthcare facilities. [Documents 1.9, 3.15]

Perceived negative power language and processes

We identified negative power dynamics embedded within the wording of the policy itself, such as the use of traditional public health surveillance and punitive language (e.g., ‘compliance’ and ‘enforcement’), which was consistent with the language of the HCW collective agreements. The frequent appearance of language referring to policy ‘compliance’ and ‘enforcement’ was perceived by focus group participants as adversarial. A combat discourse surfaced as participants talked about the

policy implementation, using terms such as *battle*, *win*, *lose*, *sides*, *fight*, *launch*, *round*, and *bullying*.

Bullying was referred to in the context of staff bullying other staff into not masking after the policy was held in abeyance even though some were prepared to continue with the practice:

The other piece that was significant that we heard over and over again was bullying. [Participant # 13]

Because it is just so devastating and then immunizers who do the work, the abuse they take from staff is really not good. And so then we have all these respectful workplace issues that are now churning because people are, like, not respectful. [Participant #5]

Some of the embedded processes related to enforcement were perceived as punitive. For example, the policy required that HCWs display a sticker on their identification badge signaling they had received the vaccine, to which front-line staff reacted very negatively:

Stickers were a deterrent to creating a positive attitude around flu vaccine in the workplace...it just undermines us...felt judgmental...like we were shaming people. [Participant #47]

Personal impacts

Many participants, as health care leaders, reflected on the personal impact of the policy implementation. For example, inconsistency in local policy implementation was identified as a professional credibility issue for some managers:

The policy hadn't been implemented the same way in all the health authorities, which really damages our credibility with our staff. [Participant #24]

Leaders reported a loss of professional credibility because of the abeyance announcement; after planning and engaging staff, they reported feeling *blindsided*, *demoralized*, *disrespected*, and *disappointed* when the policy was not implemented as planned. Some participants were concerned that the credibility of the policy itself was compromised:

I really had to deal with a lot of fallout from my team in terms of feeling demoralized and depressed and just the extreme letdown from having done all that work...the experience of having the rug pulled out from us at the end really damaged our credibility with our staff and the credibility of the policy. [Participant, #15]

Participants reported experiencing an ethical tension between the duty to care and personal autonomy when the media framed the union grievance around human rights and right to privacy [Documents 3.10–3.17]. Document analysis revealed that the media policy discourse was rife with contradicting information unsupported by references, which made it difficult to determine the sources [Documents 3.15–3.21]. Newspapers repeatedly reported “confusion” among HCWs about the policy, which added to the personal toll. Participants also noted the personal impacts at the front line. In some facilities, peer immunizers bore the brunt of HCW dissent towards the policy:

It was just so devastating...immunizers who do the work, the abuse they take from staff is really not good...we have all these respectful workplace issues that are now churning because people are not respectful. [Participant #5]

Discussion

The focus of this study was on *how* to develop and implement a pan-provincial HCW influenza vaccination policy. Issues embedded in macro (system and provincial), meso (organizational), and micro (individual HCW) level contexts²⁴ were critical to policy implementation.

Macro-level. A key learning from this study is that decision-makers face challenges implementing policies within the context of political processes such as collective bargaining. However, given the politicization of health services and the *timing* game embedded in relatively short political and major policy cycles in Canadian provincial/territorial jurisdictions, there may never be an ideal time to proceed with such policy action. Decision-makers may be frustrated in looking for an ideal political window of opportunity,³² which would be unnecessary if HCW vaccination within influenza control programs was solidly framed as a patient safety and operational issue that ought to rise above political posturing. This calls into question the role and reach of Ministries of Health in these operational policy decisions. Consistent with study proposition 1 (see Table 1), early negotiations and role agreement between senior health authority leaders, provincial/territorial elected officials, and senior bureaucrats is essential for successful policy implementation.

Time, including the *quality* of that time, may be much more important in success than *timing*. Findings highlighted the lack of time dedicated to the early phases of policy development for transparency and for deliberate and meaningful collaboration with key stakeholder groups, including unions, physicians, and front-line staff. This early engagement principle for quality healthcare workplaces is age-old,³³ yet there remains a tendency to push it aside with politically charged issues. Unnecessary delays in policy announcements and implementation can be minimized/avoided with timely planning (e.g., risk mitigation by anticipating impacts on existing policies, enhancing existing data tracking infrastructure, confirming human resource needs throughout the system), a finding that supports study proposition 2 (see Table 1). Committing to time for thoughtful planning demonstrates leadership support for the policy and for staff. Commitment of senior leadership, accountability of frontline managers, and early delivery of education and resources were identified as key success factors in other mandatory HCW influenza immunization programs³⁴ and in proposition 3 (see Table 1). Perceived lack of leadership support was identified as a key policy barrier.¹² When management focus strays from healthcare worker immunization programs, coverage may decrease rapidly, and decreased attention rapidly results in reduced coverage.¹⁷

Thoughtful planning allows time for paradigmatic issues across sub-sectors of the healthcare system and for various professional ideologies to be surfaced, explored, and reconciled. The importance of consciously considering the role of public health in acute and long term/residential care settings³⁵ was evident in this study. Taking time to explore this issue within the context of partnership building as the policy is developed is crucial to accepting and moving beyond the challenges associated with blending traditionally socialized silos.³⁶

Table 1. Study theoretical propositions.

Proposition 1	It is crucial that leaders identify and engage their program team in HCW influenza immunization program development as a key support for policy implementation. ^{10,38} The role of opinion leaders and physicians cannot be understated, and is especially important during the planning and implementation stages of the policy. ³⁸
Proposition 2	Clearly outlining and communicating an implementation plan will support policy implementation. ³⁸
Proposition 3	The leadership team must determine appropriate program components and relevant tools to support policy implementation. For example, program components such as the following may be deliberately considered: role models, vaccine access, education and promotion (including communication strategies), enforcement of the mask policy, and tracking and reporting immunization rates. ¹
Proposition 4	Establishing human and financial resources is crucial in facilitating policy implementation. ³⁸
Proposition 5	Developing an ongoing evaluation process and knowledge dissemination planning is crucial in facilitating policy implementation. ³⁸

Meso-level. Addressing policy implementation gaps arising from locally-driven interpretations and changes can be challenging. Health authorities must accommodate local circumstances in true pan-provincial partnerships. Meaningful local representation at provincial planning tables bridges and integrates provincial/territorial policy and local knowledge of services, resources and cultures. Many of the negative policy implementation gaps identified in the BC experience were products of compressed and surprise timelines. Again, consistent with findings from other studies^{12,18,33} and with study propositions 1 and 2 (see Table 1), thoughtful, transparent and engaged planning demonstrates leadership and front-line manager support to mitigate these potential policy gaps.

Micro-level. Decision-maker awareness of micro/individual-level impacts experienced by HCWs is crucial. Appropriate attention and intervention across macro- and meso-level contexts can positively impact the micro-level experience.²⁴ Issues of professional credibility, peer bullying, and ethical practice tensions around the BC policy were borne of macro- and meso level issues, such as the short implementation timeline and the abeyance event. There is irony in that a policy developed within the context of patient safety and wellness would be impacted by an abeyance that left front-line managers and other staff feeling demoralized and disrespected.

Deliberate mitigation and monitoring such critical impacts are key to a policy implementation plan, and match propositions 4 and 5 (see Table 1). At macro- and meso-levels, attention to the necessity of traditional public health surveillance discourse is a consideration that has clear individual-level impacts.

Limitations

Readers should not generalize from a single case study design; consistent with qualitative research, they should assess the degree of theoretical transferability and ‘fittingness’ with other contexts.³⁷ In qualitative research, this means that it is the responsibility of the reader to determine if the findings are applicable to their own context. Participants were drawn from senior leaders and thus perspectives from front-line staff were not represented in this study. A major strength of this work

was the use of propositions as the theoretical basis for study design, allowing us to draw on many theoretical perspectives.

The use of Framework Analysis methods, originally developed for public health system research purposes, strengthened the analytical process and the credibility of the findings.

Future directions

Around the world, health care is delivered according to a public, private or a mixed public-private model. There is a wealth of literature about implementing a condition of service and mandatory influenza vaccine policy in the American context which has a mixed public-private delivery model.^{15,18,19} In Canada, health care is delivered within a public system delivery model and thus provides new insights into how condition of services can be implemented within this context. Most Canadian jurisdictions will benefit from the experience of the B.C. initiative given that they were the first to implement a province-wide condition-of-service influenza immunization policy. The unique case study approach we used provides an individual, organizational, and provincial level understanding of issues that arose during implementation. More specifically, recommendations for other provinces/jurisdictions considering implementing a similar condition-of-service influenza policy include: early engagement of stakeholders, consideration of complex political contexts, allowing time to plan appropriately, creating ‘enforcement’ plans, and ensuring that frontline providers have adequate education and skills. A follow-up research study on years 2 and 3 of the BC Influenza Prevention Policy for healthcare workers is currently being undertaken and will be presented at a later date.

Materials and methods

A case study approach with theoretical propositions^{21,22} recently published elsewhere²³ guided this research. Case studies are generalizable to theoretical propositions, each of which directs attention to something to be examined within the scope of the study.²¹ Propositions related to the substantive research questions were drawn from existing theory and empirical research. Critical for this case study was the use of propositions in lieu of a theoretical framework²¹ to: (a) direct attention to particular concepts that should be examined within the scope of the study, and (b) support study feasibility by narrowing the relevant evidence in data collection and analysis.²¹ Table 1 summarizes the study propositions.

Case study was used because we were trying to examine a complex system, understand a contemporary set of events (province-wide public policy implementation) over which the investigator had little or no control, and trace operational links over time.²¹ This approach enabled understanding of policy development and implementation at multiple levels: micro (individual manager), meso- (organizational), and macro-level (system, provincial).^{21,24} This multi-level approach is particularly critical for complex public systems and health systems change.

The Case was a **unique current event** – the implementation of the nascent province-wide condition-of-service HCW influenza prevention policy. To date, this was the first known

Canadian province to attempt a province-wide public health policy implementation of this nature, making this a *unique case* type, which is important in tracing novel policy development and implementation.²¹ This case was bound by time (2013 – 2014); organizational parameters (health organizations defined by the health authorities for the policy); geographical/place boundaries (province of BC, health authorities' boundaries as outlined in provincial legislation); and policy definitions of HCW and policy implementation teams. Supplemental text 1 provides an overview of the study case event.

Data sources included people and documents. Purposeful sampling with maximum variation and predefined criteria (e.g., profession, implementation role, location, able to speak English, able to participate in focus group interview in person) was used to seek sample diversity and breadth across members of seven implementation teams associated with each health authority. An emailed letter was used to introduce the project and recruit participants. Policy and contextual documents were purposefully sampled^{21,25} between April 2013 and December 2014.

Interview data were collected between April and May 2013. Seven semi-structured face-to-face focus group interviews, each lasting 1.5–2 hours, were conducted, digitally recorded, and transcribed. The focus group guide consisted of 10 questions, such as: Based on your experience with this policy, what were the top three factors that supported (or inhibited) policy implementation? Which processes supported policy implementation? Which processes inhibited it? As per an iterative qualitative methodology, the guide was flexible, and evolved over the course of the scheduled interviews to reflect the developing themes as data collection and analysis proceeded.²⁶

Framework Analysis²⁷ guided analysis of the interview data. This method was developed in the context of applied policy research,²⁸ and is increasingly used in applied health research.²⁹ Conceptual scaffolding, a particular method within framework analysis, and its five iterative stages and processes was followed: (a) familiarization, (b) identifying a thematic framework, (c) indexing, (d) charting, and (e) mapping and interpretation.^{27,29} CMP and DH developed and verified codes under the thematic framework.

A variety of documents were purposefully sampled using pre-defined criteria of document type (e.g., health authority and provincial policy development and implementation materials). Documents were collected through an informant process whereby key people associated with the policy implementation were asked to identify documents that related to the study questions.²⁵ Documents were retrieved throughout the study. These documents were analyzed within their social setting as situated products to trace patterns of social exchange and the social networks behind them.²⁵ Particular attention was paid to: (a) content, not their fixed meaning but a situated or referenced meaning; (b) how they were produced; and (c) how they functioned or were used.²³ Each document was systematically analyzed using a framework that included questions such as: Whose perspective was reflected in the document? How did the document function in terms of the policy implementation events and processes?

Consistent with ensuring rigour in case study²¹ and qualitative methods,^{22,29} document and interview data were

triangulated in an iterative manner throughout data analysis to support code and theme development. Rigour was assessed through trustworthiness criteria that included assessments of credibility, transferability, dependability, and confirmability.³⁰ Consistent with a case study approach,²¹ a chain of evidence was systematically established across both data sources during data analysis and interpretation, including consistent testing against the study propositions. There was a deliberate focus on divergent patterns, negative instances, alternative themes, and rival explanations.²¹

Abbreviation

BC British Columbia;
HCW healthcare worker.

Disclosure of potential conflicts of interest

No potential conflicts of interest were disclosed.

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