The Development of Evidence Briefs to Transfer Knowledge About Advanced Practice Nursing Roles to Providers, Policymakers and Administrators

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Abstract
The transfer of health-related research knowledge between producers and users is a complex, dynamic and iterative process. There has been little research describing the preferred knowledge transfer strategies used by different stakeholder groups, including healthcare providers, policymakers and administrators. The purpose of the survey was to gain an understanding of the content and preferred dissemination strategies of knowledge users of briefing notes about the effectiveness of advanced practice nursing (APN) roles in Canada. An on-line cross-sectional survey was conducted from December 2011 to January 2012. Purposeful sampling was used to identify the target audience. The questionnaire included six items. The response rate was 44% (n=75/170). Participants identified that the briefing note should concisely summarize definitions for APN roles and information about the safety, effectiveness, cost savings and effective role implementation strategies. Multiple approaches were favoured to disseminate the information. Preferred dissemination strategies included personalized emails, meeting with briefing note recipients, engaging nurse practitioners and clinical nurse specialists in organizations where APN roles have been successfully implemented, engaging the media and using social media. The use of briefing notes has shown promise. More research is needed to evaluate the effectiveness of tailored briefing notes.

Introduction
The transfer of health-related research knowledge between producers and users is a complex, dynamic and iterative process (Ward et al. 2010). Decision-makers incorporate a mix of beliefs, ideologies, values and information when making healthcare decisions (Lomas 2000). Such decisions are influenced by different types of information including context-specific colloquial and context-free research evidence (Lomas et al. 2005). More specifically, information sources that inform healthcare decisions can be anecdotal, experiential or research-based (Lomas 2000; Carter et al. 2013). To influence the uptake of research evidence by individuals at the policy and organizational levels, Contandriopoulos and colleagues (2010: 459) argue that knowledge producers need to incorporate various information sources to translate “information into action proposals to influence others’ thoughts and practices.”

Researchers examining the process of knowledge transfer (Lavis 2006; Panisset et al. 2012) have focused on the importance of problem definition, analysis of the context of implementation, knowledge selection, identification of knowledge transfer activities and the evaluation of the actual use of research evidence. However, there has been little research describing the preferred knowledge transfer strategies used across stakeholder groups. The purpose of the project was to gain an understanding of the content and preferred dissemination strategies of
knowledge users of briefing notes about the current status and effectiveness of nurse practitioner (NP) and clinical nurse specialist (CNS) roles in Canada. This paper reports on the process of developing a briefing note and the identification of preferred content, format and dissemination strategies as identified by healthcare providers, policymakers and administrators in Canada.

**Literature Review**

The use of the most-up-to-date knowledge to inform clinical practice, healthcare decisions and policies makes intuitive sense to healthcare providers, administrators and policymakers. Yet, there continues to be “an undesirable gap between what is known from research evidence and the policies pursued by health policymakers” (Moat et al. 2013: 605). Only about half of patients receive care that is consistent with current research evidence (Grimshaw et al. 2012). The transfer of knowledge between knowledge producers and users in a reasonable period is an important step in improving the health of patients, communities and populations (Banzi et al. 2011). However, the process of transforming knowledge into action has been characterized as “messy” (Ward et al. 2010: 4), non-linear, cognitive and interpersonal (Gauthier et al. 2005; Aita et al. 2007).

Global initiatives have been undertaken to build capacity and strengthen evidence-informed decision-making among policymakers in low- and high-income countries (Hanney et al. 2003; Ranson and Bennett 2009; Wachsmuth-Huguet 2011). Research evidence that is used by policymakers and administrators to set priorities can strengthen healthcare systems and support healthcare reforms (Hanney et al. 2003; Ranson and Bennett 2009). Finding suitable approaches to present research evidence can reduce the barriers to the use of research in healthcare decisions.

Briefs are commonly used in business and government as communication tools to concisely summarize large amounts of information. Policy briefs represent a relatively new approach to presenting research evidence to policymakers and administrators in Canada (Lavis et al. 2009). The purpose of a policy brief is to summarize existing research to inform decision-making around a high-priority issue but not to recommend a specific policy option (Lavis et al. 2009; Nabudere et al. 2010). Policy briefs generally include a one-page summary, an executive summary and a report, but their lengths vary considerably (Lavis et al. 2009). Briefing notes represent a different way of presenting research information. They are short plain-language summaries. The length of briefing notes varies between one and three pages (Canadian Interprofessional Health Collaborative 2007; International Policy Fellowships 2009). Briefing notes generally contain a purpose, a summary of the facts, key considerations, options or next steps, a conclusion and/or recommendations (University of Victoria nd). Important considerations when writing
a briefing note are to clarify the information needs of the readers and target audiences and the key messages to be included (University of Victoria nd).

The target audience in Canada and their information needs are diverse. Several healthcare priority needs have been identified, including improving post-acute and mental healthcare services, homecare, end-of-life care, healthcare reporting systems and the planning management of health human resources (Health Council of Canada 2012). Important areas to focus on to improve health human resource management and patient care include interprofessional education, the development of interprofessional teams and the optimal use of each provider role in the team (Dzau et al. 2012; Health Council of Canada 2012).

Healthcare delivery is evolving to meet the needs of patients, families and communities. Delivery models, like team-based care, that promote interprofessional care and optimize the scope of each professional’s role in the team are believed to be the most effective way to provide healthcare services in acute and primary care (Canadian Academy of Health Sciences 2014). The integration of NPs and CNSs in interprofessional teams is one approach to support the provision of interprofessional patient-centred care. All provinces and territories in Canada have legislation in place since 2012 to support the NP role (Kaasalainen et al. 2010; Government of Yukon 2012). In 2012, there were 3,157 NPs in Canada (Canadian Institute for Health Information [CIHI] 2013). NPs are:

registered nurses with additional educational preparation and experience who possess and demonstrate the competencies to autonomously diagnose, order and interpret diagnostic tests, prescribe pharmaceuticals and perform specific procedures within their legislated scope of practice (Canadian Nurses Association [CNA] 2009: 1).

CIHI (2012) reported 2,431 self-identified CNSs in 2010. Of this group, 782 nurses meet the educational requirement of graduate-level education (CIHI 2012). CNSs are expert practitioners in a clinical specialty who provide leadership, administrative, research and educational supports to members of the healthcare team, the organization and the healthcare system (Sparacino 2005; Humphreys et al. 2007; Trevatt et al. 2008; CNA 2014). There is no title protection for CNSs in Canada. CNSs can be found in all provinces in Canada, but there are no CNSs in the three Northern Territories (Kilpatrick et al. 2013).

In 2010, DiCenso and colleagues (2010a) conducted a scoping review of the international literature examining advanced practice nursing (APN) roles. The goal of the scoping review was to understand the current use of NP and CNS roles and
the individual, organizational and health system factors that influence their effective development and integration in the Canadian healthcare system. NPs and CNSs have been part of the healthcare system for over 40 years, but their integration in the healthcare system has been challenging. Eleven recommendations were formulated by a national roundtable of executives, policymakers, clinicians and administrators to disseminate the findings of the scoping review (Montelpare and Lewis 2009; DiCenso et al. 2010a). One recommendation was that a communication strategy be developed in collaboration with government, employers, educators, regulatory colleges and professional associations to educate nurses, other healthcare professionals, the Canadian public and healthcare employers about the roles, responsibilities and positive contributions of APN.

Several key messages emerged from the scoping review of the APN literature (DiCenso et al. 2010a). Among them, NPs and CNSs are expert clinicians with advanced clinical decision-making skills and a high level of autonomy. The roles include clinical and non-clinical role dimensions (e.g., research, education, administration, consultation). A recent systematic review of the cost-effectiveness of APN roles found that advanced practice nurses are safe and effective, and they can help to reduce healthcare costs in primary care (DiCenso et al. 2010b; Donald et al. 2014). Key facilitators of NP and CNS role integration include systematic planning of role implementation, early stakeholder involvement, clearly defined NP and CNS roles and public and health provider awareness of the roles. Consistent policies, legislation and regulation as well as support from nursing and medical administrators are key to implementing and integrating NP and CNS roles into healthcare systems (Delamaire and Lafortune 2010; DiCenso et al. 2010b).

There is some evidence to guide the choice of knowledge translation strategies for healthcare providers, but there is a lack of research describing the effects of different knowledge translation strategies on policymakers and administrators (Grimshaw et al. 2012). As the initial step in the development of a structured dissemination plan for the scoping review, we set out to gain an understanding of the preferred format of briefing notes from the perspective of the target audiences.

**Methods**

We conducted a cross-sectional survey of potential end-users of briefing notes including healthcare providers, policymakers and administrators across Canada. We worked closely with an 18-member national advisory committee to inform the development of the briefing notes over five teleconferences and via email feedback. We used an on-line self-report questionnaire because it is a cost-effective method to gather information from participants in geographically diverse regions.
The project aimed to strengthen our knowledge translation efforts by engaging stakeholders in clarifying key content, dissemination strategies and the target audience of the briefing notes.

Sample
Healthcare providers (e.g., CNSs, NPs), policymakers and administrators who work in government and regulatory agencies at the local, provincial and national levels across Canada were purposefully recruited (Lavis et al. 2003). Participants were identified using publicly available information (e.g., contact information on the professional association website). We invited potential end-users (n=170) of the briefing notes because they represented the target audience and had experience implementing APN roles. The sample consisted of those on contact lists of the Canadian Health Service Research Foundation/Canadian Institutes of Health Research Chair Program in Advanced Practice Nursing, a national education and research unit as well as individuals recommended by the members of the project’s National Advisory Committee.

Data collection
Data were collected from mid-December 2011 to the first week of January 2012 using a survey tool created by the research team. A personalized email was sent to potential respondents inviting them to complete the survey and one reminder email was sent after two weeks. The Research Ethics Board of McMaster University did not require participants to sign a consent form. We contacted respondents through their work email and collected no personal information from respondents. All participants were informed of the project’s purpose in the cover letter. Participation in the survey was voluntary.

Questionnaire
The questionnaire consisted of six questions (three closed- and three open-ended questions). One question sought to identify the respondents’ primary area of responsibility (i.e., policymaker, administrator, other). A second question used five-point Likert-scale responses (Scale 1 = not important to 5 = very important). In this question, we asked respondents to rate the importance of eight potential content areas for inclusion in the briefing notes. The topics included: (1) definitions of NP and CNS roles; (2) characteristics distinguishing between the NP and CNS roles; (3) effectiveness of the roles; (4) value-add of the roles; (5) scope of practice; (6) effective strategies to integrate the roles; (7) settings in which the roles were implemented; and 8) stories to exemplify the roles. The third closed-ended question asked respondents about the optimal page length (i.e. one-page, two-page, three-page, other), visual presentation and format for the briefing notes. Three open-ended questions were used to identify respondents’ views about the
most effective dissemination strategies for the briefing notes and key stakeholders who should receive them. The questions included: (1) What recommendations do you have about the visual presentation and format of the briefs that will entice decision and policymakers to read and use this information?; (2) What two recommendations do you have for effectively disseminating these briefs to key stakeholders (e.g., policymakers, administrators)?; and (3) What other advice do you have as we move forward with this?

Data analysis
Descriptive statistics (Field 2005) were used to summarize the data. The purpose of the survey was to gain an understanding of the content of the briefing note and preferred dissemination strategies of knowledge users. Due to the small sample size, we did not compare responses across respondent groups. Participants provided 149 responses to the three open-ended questions. Content analysis was used to categorize all of the qualitative data (Bowling 2009). Data reduction transformed the raw data into more manageable parts and allowed us to identify key themes (Miles and Huberman 1994). The responses to the open-ended questions were categorized and quantified to produce frequencies (Bazeley 2009).

Results
Seventy-five participants (44%) responded to the on-line survey. Respondents included policymakers (40%, n=30), administrators (17%, n=13), CNSs/NPs (16%, n=12), academics/educators (9%, n=7), researchers (5%, n=4), clinicians (5%, n=4) and others (7%, n=5).

Respondents were asked to rate the importance of specific information items to be included in the briefing notes. A summary of the responses is provided in Table 1. Clarifying CNS and NP role definitions and outlining the key characteristics of each role were particularly important. In the open-ended question in this section, a respondent noted the need for:

A clear understanding that both roles are advanced practice with an explanation of how this differs from expanded role nurse.

In terms of the ideal format, there was a general consensus among respondents that the briefing notes should be “clear,” “concise” and “succinct.” The majority of respondents (76%, n=57/75) thought that the brief should be one to two pages in length. Content that included information about patient safety, effectiveness and cost savings was particularly important to respondents (22%, n=14/64). Respondents recommended 64 strategies to optimize the visual presentation of the briefing notes. The most frequently reported recommendations included
formats to use, including bullet points with hyperlinks to research evidence (17%, $n=11/64$), headers with short explanatory paragraphs (12%, $n=8/64$), side-by-side charts that describe NP and CNS roles (11%, $n=7/64$) and the use of simple language (9%, $n=6/64$) to entice end-users to read the briefing notes.

Respondents were asked to provide two recommendations to effectively disseminate the briefing notes to key stakeholders. There was a general consensus that it was important to enlist the help of regulators as well as the federal-, provincial- and territorial-level Chief Nursing Officers and Advisors, Chief Nursing Executives and Chief Executive Officers across the country to facilitate dissemination of the briefing notes. The respondents ($n=62$) favoured: (1) the use of multiple approaches (44%, $n=27/62$), including a mix of emails, paper copies, face-to-face contacts and social media; (2) email only (24%, $n=15/62$); (3) face-to-face meetings (3%, $n=2/62$); and (4) webinars only (3%, $n=2/62$).

In the open-ended questions, respondents (24%, $n=15/62$) identified a number of processes to reach key individuals and groups, including targeted meetings with stakeholder groups and engaging the media. Respondents highlighted the importance of clearly articulating the focus of the briefing note, outlining the contributions of NP and CNS roles to patient care and outcomes of care. Respondents believed that it was important to focus on patient care and outcomes and not to appear as self-serving. A respondent stated:

Make sure that the policy is clearly focused on patient care...not on the role.

Table 1. Importance Rating of Specific Information Items

<table>
<thead>
<tr>
<th>Information Item</th>
<th>n</th>
<th>Mean*</th>
<th>Standard Deviation (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key characteristics to distinguish NP and CNS roles</td>
<td>75</td>
<td>4.67</td>
<td>0.62</td>
</tr>
<tr>
<td>Effectiveness of NP and CNS roles</td>
<td>75</td>
<td>4.63</td>
<td>0.69</td>
</tr>
<tr>
<td>Value-add of the NP and CNS roles</td>
<td>75</td>
<td>4.61</td>
<td>0.82</td>
</tr>
<tr>
<td>Scope of practice</td>
<td>75</td>
<td>4.51</td>
<td>0.72</td>
</tr>
<tr>
<td>Effective strategies to integrate NP and CNS roles</td>
<td>74</td>
<td>4.46</td>
<td>0.86</td>
</tr>
<tr>
<td>Settings in which the role is implemented</td>
<td>75</td>
<td>4.23</td>
<td>0.92</td>
</tr>
<tr>
<td>Stories to exemplify the roles</td>
<td>74</td>
<td>3.97</td>
<td>1.01</td>
</tr>
<tr>
<td>Other</td>
<td>20</td>
<td>3.25</td>
<td>1.77</td>
</tr>
</tbody>
</table>

*Response scale: 1 (not important) to 5 (very important)
When asked to share their most effective research dissemination strategies, respondents proposed a number of activities to ensure that the briefing notes were received and would entice key stakeholders to review them. The strategies included: (1) sending an individualized email in advance of the briefing note; (2) arranging a follow-up meeting with recipients to receive feedback on the briefing notes; (3) planning to meet with key stakeholders and present the findings of the briefing notes; (4) engaging NPs, CNSs and the Chief Nursing Officer in an organization where NP and CNS roles have been successfully implemented to influence policymakers and administrators; (5) asking practicing NPs and CNSs to be part of briefing note presentations and describe their roles; (6) getting to know the government representative and the chief of staff; and (7) engaging the media and using social media. One respondent noted:

Make policymakers care.

**Discussion**

This survey of healthcare providers, policymakers and administrators identifies the content, format and preferred strategies for disseminating briefing notes to a diversified target audience. Respondents emphasized the need to concisely and clearly define NP and CNS roles, and focus on the contributions of these roles to patient outcomes. The difficulty policymakers and administrators have understanding the differences between roles and the value-added of APN has been identified previously (DiCenso et al. 2010b; Carter et al. 2013). The optimal length of the briefing note was two pages. Multiple approaches were favoured to disseminate the findings of the briefing notes. Respondents recommend engaging practicing NPs and CNSs to influence stakeholders, as well as using the media and social media to disseminate the briefing notes. The briefing notes are available through the Canadian Centre for APN Research.

Information about how the target audience would use the briefing notes promotes knowledge brokering. Policymakers, administrators, CNSs, NPs, educators, researchers and clinicians are in fact knowledge brokers in their organizations and play an important role in disseminating research evidence about APN roles (Carter et al. 2010, 2013). Enlisting these participants helped us to understand how to make our research findings usable and how to assist healthcare providers, policymakers and administrators in disseminating their work.

We worked closely with a national advisory committee to refine the briefing notes taking into account the survey respondents’ responses and the committee’s knowledge and experience with knowledge transfer activities and briefing note dissemination. The preferred briefing note format changed considerably over the
course of the project and discussions with the advisory committee. Researchers and stakeholders needed to remain flexible to find the briefing note format that best met participants’ expectations. Efforts to identify the target audiences, key messages and effective dissemination strategies are essential to the process of moving research into action (Lavis et al. 2003; Dobbins et al. 2009).

Our response rate (44%) was acceptable for Web-based surveys (Van Horn et al. 2009; Chen and Goodson 2010). Due to the tight timelines to complete this project, we collected data over a holiday period and sent only one reminder to potential participants. This period was not ideal and inconsistent with Dillman et al. (2009), who recommend that two additional reminders be sent to optimize response rates. However, quickly engaging end-users and identifying the strategies they find useful may have accelerated the dissemination of relevant research findings. Edwards et al. (2011) argue that the cycles of practice, policy, legislative and educational changes occur at different rates for clinicians, regulators and administrators. To enter the policy cycle, researchers must engage policymakers and administrators when a topic has their attention (Moat et al. 2013). Policymakers and administrators need to reconcile institutional constraints, interest-group pressure, values and significant or noteworthy events when making policy decisions (Moat et al. 2013). Researchers need to adapt to these challenges to facilitate knowledge user engagement in knowledge transfer activities.

Some limitations must be kept in mind when interpreting the project findings. We identified healthcare providers, policymakers, administrators, educators and researchers using the email lists of a national APN research and research training program. We purposefully contacted participants across Canada who we identified as the potential target audience of the briefing notes. We may have captured the views of a highly motivated and well-informed group. We did not collect demographic information from respondents. Thus, it is not possible to ascertain if the survey respondents represented different geographical regions in Canada or if the views of respondents differed based on years of experience in their professional role. Further work is needed to identify if the views of healthcare providers, policymakers and administrators change as they gain experience in their role or if policymaker and administrator priorities change across jurisdictions in Canada. In addition, subsequent research needs to assess if the use of tailored briefing notes and an optimal format increase the use of research in healthcare and policy decisions.

**Conclusion**

Little is known about which methods of knowledge transfer are preferred by healthcare providers, policymakers and administrators. This small project is an example of engaging the target audience to shape a knowledge transfer strategy to
enhance its effectiveness. The use of briefing notes has shown some promise. More research is needed to understand healthcare provider, policymaker and administrator needs for research evidence and their preferred methods to obtain the evidence to inform policy and healthcare decisions, and to evaluate the effectiveness of different knowledge transfer strategies.

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