

# **Knowledge Transfer and Dissemination of Advanced Practice Nursing Information and Research to Acute-Care Administrators**

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The objective of this study was to ascertain the information needs and knowledge-dissemination preferences of acute-care administrators with respect to advanced practice nursing (APN). Supportive leadership is imperative for the success of APN roles and administrators need up-to-date research evidence and information, but it is unclear what the information needs of administrators are and how they prefer to receive the information. A survey tool was developed from the literature and from the findings of a qualitative study with acute-care leaders. Of 107 surveys distributed to nursing administrators in 2 teaching hospitals, 79 (73.8%) were returned. Just over half of respondents reported wanting APN information related to model of care and patient and systems outcomes of APN care; the majority expressed a preference for electronic transmission of the information. Researchers need multiple strategies for distributing context-specific APN evidence and information to nursing administrators.

Keywords: advanced nursing practice and education, health services, nursing administration–inpatient, nursing roles

*Résumé*

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**Transfert des connaissances et diffusion  
d'information et de résultats de recherches  
sur les pratiques infirmières avancées  
aux administrateurs de soins actifs**

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L'objectif de cette étude était de déterminer les besoins en information et les préférences en matière de transmission du savoir des administrateurs de soins actifs en ce qui concerne les pratiques infirmières avancées (PIA). Les infirmières et infirmiers en PIA doivent impérativement bénéficier du soutien de leur direction pour accomplir adéquatement leur travail. Les administrateurs ont quant à eux besoin d'information et de résultats de recherche à jour pour offrir ce soutien, mais l'information dont ils ont besoin et la façon dont ils souhaitent la recevoir demeurent incertains. Un outil de sondage a été élaboré à partir de la littérature sur le sujet et des résultats d'une étude qualitative menée auprès de dirigeants de services de soins actifs. Sur un total de 107 formulaires distribués à des administrateurs de soins infirmiers dans deux hôpitaux d'enseignement, 79 (73,8 %) ont été remplis et retournés. Un peu plus de la moitié des répondants ont indiqué vouloir de l'information liée aux PIA portant sur les modèles de soins et les résultats des PIA pour les patients et le système, et la majorité d'entre eux ont dit avoir une préférence pour l'information transmise par voie électronique. Les chercheurs doivent user de stratégies multiples pour diffuser auprès des administrateurs de soins infirmiers l'information et les résultats de recherche sur les PIA propres à divers contextes.

Mots-clés : pratiques infirmières avancées (PIA), transmission du savoir, soins actifs, modèles de soins

## **Introduction**

Health-care administrators play a key role in the integration of advanced practice nurses (APNs) into acute-care settings. Supportive leadership facilitates successful integration of APN roles and contributes to APN job satisfaction (Carter et al., 2010; Reay, Golden-Biddle, & Germann, 2003). However, as health-care settings face challenging economic times, nurse leaders must have access to current APN-related research in order to make evidence-informed decisions about the best ways to utilize these roles.

In Canada, there are two types of APN: the clinical nurse specialist (CNS) and the nurse practitioner (NP). Both have existed in the country for over 40 years and have consistently been shown in randomized controlled trials to be effective. When compared to physicians, NPs provide safe, high-quality care with high levels of patient satisfaction. CNSs can reduce length of stay and cost of care for hospitalized patients (Laurant et al., 2009; Newhouse et al., 2011). Core role dimensions of these APNs include direct patient care, research, leadership, consultation, and collaboration (Canadian Nurses Association, 2008). Although they share similar core attributes, there are differences between CNS and NP roles; there are also differences within the roles, depending on the patient population and the health-care setting. This variation has led to confusion among policy-makers, health-care administrators, team members, and members of the public about the scope and roles of APNs (Donald et al., 2010). While there is an active APN research agenda in Canada that may help address their effective integration and barriers such as lack of role clarity, the challenge is to successfully transmit the research findings to those best situated to make use of them.

## **Literature Review**

The Canadian Institutes of Health Research (2013) defines knowledge translation (KT) as a “dynamic and iterative process that includes the synthesis, dissemination, exchange, and ethically sound application of knowledge to improve health, provide more effective health services and products, and strengthen the healthcare system.” Research related to KT and knowledge dissemination in health care has generally been directed to *clinical* as opposed to *administrative* decision-makers. A component of KT, knowledge dissemination is specifically focused on communicating research evidence by tailoring findings to targeted audiences (Lomas, Cuyler, McCutcheon, McAuley, & Law, 2005).

Barriers to the use of evidence by administrators include knowledge issues (lack of awareness, lack of recall), attitudes (lack of applicability or agreement), and behaviours (lack of time, organizational constraints)

(Legare, 2009). Also, there may be a reluctance to use scientific evidence because of the administrative culture of health care and the value placed on personal experience, pragmatism, and self-generated knowledge (Walshe & Rundall, 2001). A number of KT strategies have been developed to facilitate use of evidence by decision-makers, including evidence briefs (Lavis, Permanand, Oxman, Lewin, & Fretheim, 2009) and deliberative dialogues (Boyko, Lavis, Abelson, Dobbins, & Carter, 2012). A body of research focusing on Canadian public health managers has found that decision-makers want accessible, easy-to-use research information and personalized updates of new reviews related to their clinical settings (Dobbins, deCorby, & Twiddy, 2004). They prefer to receive both hard and electronic copies of information, including systematic reviews, executive summaries, and clear implications for practice (Dobbins, Jack, Thomas, & Kothari, 2007), from a variety of sources, such as websites, academic journals, e-mail, conferences and workshops, in a number of formats, including executive summaries, abstracts, and articles (Dobbins, Rosenbaum, Plews, Law, & Fysh, 2007).

Few studies have focused on identifying effective KT strategies for hospital administrators, who, perhaps because of lack of time or organizational constraints (Legare, 2009), make minimal use of research evidence in health-care management (Nicklin & Stipich, 2005). In particular, middle managers have been largely overlooked in studies of health research uptake, even though they are often the ones most involved in applying research findings on a day-to-day basis (Birken, Daniel Lee, & Weiner, 2012). Limited use of research evidence to guide decision-making is one of the many issues influencing CNS and NP role development, implementation, and evaluation (Bryant-Lukosius & DiCenso, 2004). Carter and colleagues (2013) used qualitative methods to explore knowledge gaps about APNs and the type of information used by acute-care leaders. Administrators reported that nurses, administrative colleagues, and physicians misunderstood the value-added of APNs and felt that CNSs were less understood than NPs. The participants preferred to contact CNSs, NPs, and administrative colleagues for research information and rarely searched for evidence on their own, despite wanting information on role implementation and cost-effectiveness of CNS and NP utilization.

In summary, few studies have attempted to identify the best ways to disseminate research evidence to administrators and no studies have quantified the need for APN information or the type of information needed. Little is known about acute-care administrators' APN-related information needs or their preferred means of receiving such information. In order to address issues related to role clarity and support the

uptake of NP and CNS roles in our health-care system, we need a better understanding of KT strategies and APN information.

### **Study Objectives**

The objective of this study was to develop and pilot-test a survey tool that could be used with a sample of health-care administrators to learn about their APN information needs and their preferred means of receiving APN research evidence. The survey addressed three primary questions:

1. Do health-care administrators need information and research evidence about NP and CNS roles?
2. If they do, what information and research evidence do they want?
3. How do they want the information and research evidence disseminated to them?

In this article we describe the survey development process and provide descriptive statistics from the pilot study.

### **Theoretical Framework**

To inform our work, we used the framework for guiding dissemination of research findings to decision-makers developed by Lavis, Robertson, Woodside, McLeod, and Abelson (2003). The framework uses five questions to shape KT strategies with decision-makers: 1. What should be transferred to decision-makers? 2. To whom should research knowledge be transferred? 3. By whom should the research knowledge be transferred? 4. How should research knowledge be transferred? 5. To what effect should research knowledge be transferred?

This study focuses on questions 1 and 4: the research *messages*, or what APN information should be transferred, and the KT *processes*, or how APN information and research evidence should be disseminated.

### **Methods**

#### ***Research Design***

The study was approved by the Research Ethics Board of McMaster University and the two participating hospitals. We developed and piloted a survey to describe APN-related information needs and preferred dissemination strategies for APN information.

#### ***Sample***

Study participants worked in one of two urban teaching hospitals in south-central Ontario, Canada. They were identified from mailing lists

provided by administrative assistants at the two hospitals and included vice-presidents, directors, managers, and professional practice leaders. To be included in the study, potential participants had to be situated within an area or program where an APN was deployed.

### ***Survey Development***

The initial content for the survey was identified through review of the APN- and KT-related literature and through qualitative interviews with 15 administrators, physicians, NPs, and CNSs (Carter et al., 2013). Interview participants were asked about their experience developing, implementing, and evaluating APN roles. The survey comprised 26 questions in four sections: demographic data, respondent setting and role, experience with APNs in the work setting, and information needs about APN. Specifically, questions addressed information needs, current sources of information, and preferred means of receiving information and research findings. Drafts of the survey were reviewed by a group of researchers and graduate students who were part of an APN research program. The survey and pretest were structured according to Dillman's (2007) tailored method. This included writing the covering letter for the survey and ensuring a respondent-friendly questionnaire with personalized messages.

The survey was pretested for face and content validity with three administrators, a nursing faculty member with administrative expertise, and a researcher with experience in designing surveys. Content validity was assessed in the following ways: use of results from qualitative interviews, review of drafts by researchers with content expertise, and comments about comprehensiveness by the five individuals who pretested the survey.

### ***Data Collection***

Surveys were mailed directly to participants through inter-hospital mail in the fall of 2011. All surveys were anonymous and were sent with a self-addressed return envelope. A coupon from a national coffee shop chain was included with the survey to promote participation. Consent was inferred through return of the completed survey. A data-entry system was maintained by the research assistant. The principal investigator was blinded to participants' names. Surveys were coded and the document that linked names and codes was kept by the research assistant. The research assistant used this data system to generate reminders. Two weeks after the initial mail-out, the research assistant sent a reminder letter to non-respondents.

**Data Analysis**

The data were analyzed using descriptive statistics and means and frequencies were calculated to summarize the demographic data and responses to questions. Chi-square tests were used to compare differences between participants.

**Results**

**Respondent Characteristics**

A total of 107 surveys were distributed and 79 were returned, for a response rate of 73.8%. Two surveys were removed from the analysis because only minimal questions were answered. Demographic characteristics of the respondents are shown in Table 1. The majority (75.3%) were

<b>Table 1 Respondent Characteristics</b>			
	<b>Total Respondents N = 77 (%)</b>	<b>Wanting APN Information n = 41 (%)</b>	<b>Not Wanting APN Information n = 36 (%)</b>
<b>Primary Role</b>			
Chief nurse executive	1 (1.3)	0	1 (2.7)
Executive director/administrator	3 (3.9)	1 (2.4)	2 (5.5)
Director	13 (16.9)	9 (21.9)	4 (11.1)
Clinical manager	58 (78.3)	31 (75.6)	27 (75.0)
Professional practice leader	2 (2.6)	0	2 (5.6)
<b>Profession</b>			
Nurse	67 (87.0)	34 (82.9)	33 (91.7)
Administrator	3 (3.9)	2 (4.8)	0
Respiratory therapist	3 (3.9)	2 (4.8)	2 (5.6)
Psychologist	2 (2.6)	1 (2.4)	1 (2.8)
Social worker	1 (1.3)	1 (2.4)	0
Speech/language pathologist	1 (1.3)	1 (2.4)	0
<b>Highest Educational Credential</b>			
Diploma	13 (16.9)	2 (4.9)	11 (30.6)
Baccalaureate	29 (36.4)	18 (43.9)	11 (30.6)
Master's degree	33 (42.9)	20 (48.8)	13 (36.1)
Doctorate	2 (2.6)	1 (2.4)	1 (2.8)
Mean years in current position (min-max)	4.3 (0-21)	4.1 (0.5-10)	4.6 (0.5-21)
Mean years of administrative experience (min-max)	10.2 (0.5-30)	10.7 (2-22)	9.6 (0.5-30)

clinical managers and most (87%) had a nursing background. Almost equal numbers of respondents had completed master's (42.9%) and bachelor's degrees (36.4%). The average number of years that respondents held their current position was 4.3 and the total number of years in an administrative role was between 0.5 to 30, with an average of 10.2.

In the following sections we report on respondents' experience working with APNs, reasons for wanting APN information, type of information needed, preferred methods for receiving the information, characteristics of respondents not wanting APN information, and priorities for future APN research.

### ***Experience Working With APNs***

Almost two thirds (64.9%) of the respondents had worked with APNs in the past, and approximately the same proportion (63.6%) were working with APNs in their current position. A review of responses found that 44.9% were working with either an NP or a CNS, and 34.5% were working with both NPs and CNSs.

### ***Respondents Wanting More APN Information and Research Evidence***

Just over half of the 77 respondents (53.2%) reported wanting more information and research evidence about APNs. Table 2 reports on the reasons why these 41 respondents wanted more information and research evidence. The main reasons were to help evaluate roles (73.2%) and to determine the need for roles (70.7%). Only one respondent wanted APN information in order share it with other members of the team.

	<b>n (%)<sup>a</sup></b>
To help evaluate impact of roles	30 (73.2)
To determine the need for new roles	29 (70.7)
To justify new or existing roles	23 (56.1)
To assist with budget decisions	23 (56.1)
To implement new roles	23 (56.1)
To assist with integration of current roles	20 (48.8)
To sustain current APN positions	16 (39.0)
To share with other members of the team	1 (2.4)

<sup>a</sup> Percentages sum to more than 100 because respondents chose more than one reason.



### ***Information and Research Evidence Favoured by Respondents***

The 41 respondents who wanted more APN information were asked what type of information and research evidence about CNSs and NPs would be helpful in their current administrative role. The three most common responses were models of APN practice (82.9%), studies reporting APN impact on patient outcomes (80.5%), and studies reporting APN impact on organizational/system outcomes (73.2%). The least desired type of information was APNs' educational preparation (24.4%). A breakdown of responses can be found in Table 3.

	<b>n (%)<sup>a</sup></b>
Models of APN practice	34 (82.9)
Studies reporting patient outcomes	33 (80.5)
Studies reporting organizational/system outcomes	30 (73.2)
Cost-effectiveness of APNs	29 (70.7)
Studies reporting health-care provider outcomes	27 (65.9)
Methods for role evaluation	26 (63.4)
How to utilize APNs	25 (61.0)
Clear role definitions of CNS and NP	23 (56.1)
Information on interprofessional collaboration	14 (34.1)
Educational preparation for APNs	10 (24.4)

<sup>a</sup> Percentages sum to more than 100 because respondents favoured more than one type.

### ***Preferred Methods for Receiving Information and Research Evidence***

The 41 respondents who wanted APN information and research evidence chose a variety of ways they wished to have it formatted, preferring research abstracts with commentary (75.6%), case studies or illustrative examples (70.7%), and one-page briefing notes (63.4%). The formats least chosen were newsletters (24.4%) and educational outreach (2.4%). When asked how they wanted APN information and research evidence delivered to them, the 41 participants chose dissemination through electronic means, with 78% of respondents wanting to receive e-mail alerts and 56.1% wanting to be able to access information on a dedicated website. The least preferred delivery methods were teleconference

(19.5%), videoconference (17.1%), podcast (4.9%), and distribution through professional organizations (2.4%).

### ***Respondents Not Wanting APN Information and Research Evidence***

In order to determine if there were differences between participants who wanted APN information (53.2%) and those who did not (46.8%), chi-square analysis was used. There were no differences between the two groups except that respondents who did not want APN information and research evidence on average reported a lower level of education. Table 1 provides more details from this analysis.

### ***Priorities for APN Research***

The 77 respondents selected three priority APN research topics. The two most commonly selected were outcomes research of integrated APN care related to patients (55.8%) and economic evaluations of APNs (46.8%). The lowest-priority research topics were evaluations of APN education programs (6.5%) and development of tools to determine which type of APN is needed (2.6%). There were no statistically significant differences in priorities for future research between respondents who did and did not want APN information. Differences between the two groups were the priority for economic evaluation (53.7% vs. 38.9%), evaluations of new APN roles (12.2% vs. 27.8%), and evaluations of health-care provider satisfaction with APN roles (22.0% vs. 8.3%). A complete breakdown of responses can be found in Table 4.

## **Discussion**

Our findings provide information to fill two gaps in the KT and APN literature: what APN research and evidence would be helpful to administrators, and how administrators want research evidence disseminated to them. To effectively disseminate research findings, researchers may need to develop research messages unique to each target audience. The framework described by Lavis and colleagues (2003) guided the formulation of the two objectives of our survey. Context is a key consideration, and administrators' needs for APN information and research specific to acute care have been reported previously (Carter et al., 2013). Participants wanting information chose a variety of topics, including information to assist them in their current work with CNSs and NPs (to evaluate, integrate, and sustain roles) and to help them develop new CNS and NP roles (to determine the need, justify the new role, and budget for it). Dobbins and colleagues (Dobbins et al., 2004; Dobbins, Jack, et al., 2007; Dobbins, Rosenbaum, et al., 2007) have used qualitative studies to

**Table 4 *Priority APN Research Identified by Respondents***

	<b>Total Respondents N = 77 (%)</b>	<b>Wanting APN Information n = 41 (%)</b>	<b>Not Wanting APN Information n = 36 (%)</b>
Outcomes of integrated APN care related to patients	43 (55.8)	25 (55.5)	18 (50.0)
Economic evaluation of APN roles	36 (46.8)	22 (53.7)	14 (38.9)
Evaluation of interventions provided by APNs	29 (37.7)	14 (34.1)	15 (41.7)
Outcomes of integrated APN care related to organizations and systems	27 (35.1)	13 (31.7)	14 (38.9)
Determination of the need for a new APN role	25 (32.5)	12 (29.3)	13 (36.1)
Outcomes of integrated APN care related to health-care providers	18 (23.4)	10 (24.4)	8 (22.2)
Evaluation of APN practice patterns	17 (22.1)	10 (24.4)	7 (19.4)
Evaluation of new APN roles	15 (19.5)	5 (12.2)	10 (27.8)
Evaluation of interprofessional collaboration	15 (19.5)	6 (14.6)	9 (25.0)
Evaluation of health-care provider satisfaction with APN roles	12 (15.6)	9 (22.0)	3 (8.3)
Evaluation of APN education programs	5 (6.5)	1 (2.4)	4 (11.1)
Development of tools to determine which APN is needed	2 (2.6)	2 (4.9)	0
No response	1 (1.3)	1 (2.4)	0
<sup>a</sup> Percentages sum to more than 100 because respondents identified more than one priority.			

explore Canadian public health decision-maker preferences for receiving research knowledge and have found that administrators prefer setting-specific reviews. Dissemination strategies intended to reach a specific person or group, based on their unique characteristics, are known as “tailored strategies.” In randomized controlled trials, tailored messages were found to significantly improve evidence-informed decision-making among public health decision-makers (Dobbins et al., 2009).

Approximately half of the respondents did not want more APN information and research at the time of our survey, despite reporting priorities for future APN research. It is not clear from our findings why they did not want information, and the only significant difference between the groups was that those who did not want APN information reported lower levels of education than those who did want information. Most respondents were working with an APN at the time of data collection, and over a third of respondents were working with both NPs and CNSs. This suggests that they had a good understanding of the roles and the differences between roles. Alternatively, the participants may have been receiving APN research information from their colleagues. CNSs and NPs play an important leadership role in evidence-based practice for both clinicians and administrators. In a study exploring knowledge gaps regarding APN, acute-care leaders first sought out information from colleagues within their organization, particularly CNSs and NPs (Carter et al., 2013). However, this may not be possible in organizations that employ few APNs.

Nevertheless, the key finding that half of the administrators do not want APN information is a concern. Leaders in health care are responsible for the dissemination of research evidence and supporting integration of findings (Newhouse, 2007), and at the very least it can be expected that more research and information would be useful for the members of their team. Interestingly, however, this group identified priority APN research, so they clearly were keen for specific research questions to be addressed and presumably to be told the results of the research.

Issues of role clarity and a lack of understanding of the differences between CNS and NP roles are a barrier to integration of roles, and it has been reported that frontline nurses and other health-care providers do not understand APN roles (DiCenso et al., 2010; Donald et al., 2010). One hypothesis is that in an age of information overload, administrators dislike the idea of more paper, e-mails, or alerts. There seems to be evidence, however, that this finding is more related to a lack of use of research evidence by administrators, despite the expectation of evidence-informed decision-making (Nicklin & Stipich, 2005; Walshe & Rundall, 2001; Williams, 2006). Williams (2006) suggests that nurse leaders are in an optimal position to critically review literature as a basis for management decision-making because of their clinical, administrative, and basic appreciation for the research process. Cummings and McLennan (2005) found that one of the key discoveries in implementing an APN role in an oncology centre was that evidence alone was not sufficient; in their experience, research evidence was important to physicians, but informa-

tion regarding the knowledge, skills, and ability of the actual CNS or NP was needed to convince others of the importance of the role.

Our respondents had preferences with respect to both the format of material and the methods for its delivery. Echoing the results of Dobbins, Jack, and colleagues (2007), our participants wanted information e-mailed to them, distributed in hard copy, and posted on dedicated websites, suggesting that researchers need to use multiple strategies to disseminate their findings. Original research papers, newsletters, and educational outreach were the least preferred dissemination methods. A deeper understanding of the least helpful dissemination strategies is just as important, to prevent a waste of time and resources.

### ***Strengths and Limitations***

To our knowledge, this is the only survey to explore the information needs of administrators about APN and the only survey to explore the KT preferences of acute-care administrators. The survey tool was pilot-tested with administrators working in large urban teaching hospitals. This is not representative of all of the settings in which NPs and CNSs work. However, demographic questions included in the survey distinguish between the types of work setting and geographic areas for future use. The response rate of 73.8% (79 of 107) suggests that the tool is easy to complete and understand and was of interest to the intended audience.

### ***Implications***

Supportive leadership contributes to successful integration of APN roles and to increased job satisfaction (Carter et al., 2010; Reay et al., 2003) and poor planning for APN roles is associated with unsuccessful integration of NPs and CNSs into the workplace (Bryant-Lukosius et al., 2007). Carter and colleagues (2010) report the results of a Canadian decision-support synthesis on APN, as follows: leadership strategies to optimize successful role integration include initiating systematic planning to develop the roles based on patient and community needs, engaging stakeholders, using established role implementation toolkits, ensuring utilization of all dimensions of the role, communicating clear messages to increase awareness about the roles in the organization, creating networks and facilitating mentorship for those in the role, and negotiating role expectations with physicians and other members of the health-care team. These multiple strategies require that administrators know and understand the research evidence on APN, but, as reported by Cummings and McLennan (2005), they must also have an understanding of the skills and expertise of the CNSs or NPs with whom they are working. Emerging literature demonstrates that mentoring is a strategy for influencing

change in KT and evidence-based practice (Gifford, Davies, Ploeg, Eldred, & Bajnok, 2013). By seeking out and utilizing research evidence to make decisions about APN, administrators can role model its importance with nurses, other health-care providers, and administrative colleagues.

Formal leaders may also need education and mentorship in order to seek out and utilize APN research evidence. Currently there is an emphasis on evidence-based practice in nursing curricula to prepare future clinicians, but there are fewer opportunities for senior or experienced administrators. The Executive Training for Research Application (EXTRA) program was developed through a consortium of health-services management organizations, including the Canadian Nurses Association and the Academy of Canadian Executive Nurses. Its goal is to increase the skills of health-care executives in using research evidence and bringing about organizational change (Lavoie-Tremblay & Anderson, 2007). In an evaluation of the first cohorts of the program, individuals rated their research literacy, knowledge, and skills substantially higher after the program; however, organization impacts were difficult to assess (Denis, Lomas, & Stipich, 2008).

Our results have a number of implications for researchers. APN research designed to clarify the value-added component of APN roles in acute care is indicated. The identification of key health-care and health-system outcomes relevant to CNS and NP roles, and the means by which the outcomes can be measured, will be useful in this regard (Lavis, 2011). The development of active partnerships with acute-care leaders has the potential to inform the development of APN-related research questions. In the current economic climate, where resources are routinely prioritized, research focusing on evaluating outcomes of acute-care APN roles may result in sustained administrative support for these roles. Our participants wanted information to help them articulate the value-added of APN roles, particularly the CNS role, and this need may shape the next wave of APN research. Our findings indicate the importance of researchers implementing KT strategies that target hospital administrators. They also suggest the need to collect, organize, and make available colloquial evidence to complement more traditional research evidence. Additionally, CNSs and NPs should have access to similar materials, since our findings suggest that they often assume the role of knowledge brokers for administrators.

This pilot study provides preliminary information about the knowledge needs of administrators with respect to APN. In future we will conduct a national survey to provide a more comprehensive understanding of what APN information Canadian administrators want. Both of the

settings in our study included large numbers of CNSs and NPs. A national survey would include locations that have smaller numbers of APNs and would help us to understand more fully the role that NPs and CNSs play in supporting the information needs of administrators.

### **Conclusion**

Health-care administrators and nurse researchers need to work together to ensure that research evidence about APN is in the hands of leaders who can apply it for the best patient and organizational outcomes. A culture of evidence-based administration is needed to support leaders as they apply models of nursing care delivery and promote evidence in the coming decade (Newhouse & White, 2011; VandeVelde-Coke, 2010). The preliminary results from this survey provide a first step in understanding how research and information may support acute-care administrators' decision-making about APN. Nursing leaders will have to lobby for continued nursing research funds and funds to disseminate research. Researchers, educators, and CNSs and NPs need to work together to share research and other forms of information with health-care leaders regarding how APN roles can address patient care and organizational needs in innovative ways.

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