



Nursing role in well-child care

Systematic review of the literature

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Abstract

Objective To describe and compare well-child care (WCC) in Australia, the Netherlands, and the United Kingdom (UK), focusing on the role of nurses and their interactions with other primary care providers in order to derive relevant lessons for Canada's interprofessional primary care teams.

Data sources Ovid MEDLINE, EMBASE, and CINAHL were searched broadly using the search terms *well child care*, *nursing role*, and *delivery of care* and other synonymous terms. In addition, Google Scholar was used to search for gray literature, and reference mining revealed a few other relevant articles.

Study selection The original search identified 929 articles. The inclusion criteria were the following: relevant to WCC delivery; focuses on Canada, the Netherlands, the UK, Australia, or an international comparison; describes care of healthy term infants; describes care provided in the community; and describes the role of the nurse in WCC delivery. An abstract review followed by full-text review condensed the search to 25 selected articles.

Synthesis Selected articles varied in method and scope; thus, a narrative synthesis was generated using thematic analysis. In Australia, the Netherlands, and the UK, many WCC tasks are performed by trained public health nurses in a separate but parallel system to family medicine, with interaction between nurses and FPs varying greatly among countries. In general, nurses' roles in WCC remained in the preventive care and screening domains, including monitoring development, providing health education, and supporting parents. The 3 overarching themes that were identified were around professional development and education, integration of care and interprofessional collaboration, and the nurses' role in an evolving health system.

Conclusion International examples, given Canada's primary care reforms, suggest it is time to examine greater role sharing in WCC between nurses and FPs in interdisciplinary primary care teams.

Editor's key points

- ▶ The role of nurses in the provision of well-child care (WCC) remains relatively unexplored in the literature. As the health system seeks to improve outcomes and efficiency, WCC needs to be considered in light of the evolving models of primary care delivery across Canada, specifically paying attention to health professionals' scopes of practice and the concept of task delegation.
- ▶ This systematic review describes findings from Australia, the United Kingdom, and the Netherlands that might be relevant for the Canadian system. Professional development, the functioning of interprofessional teams, and maximizing the scopes of practices of all team members for greater efficiency are key elements.
- ▶ International examples suggest Canadian FPs could enable registered nurses to provide WCC, while maintaining a therapeutic relationship with the family, if the providers work together in the same location and share the same medical records. More rigorous study and reporting of outcomes should be done to guide reform of WCC in the Canadian primary care system.



Points de repère du rédacteur

► Il existe relativement peu d'études sur le rôle de l'infirmière dans la prestation de soins préventifs aux jeunes enfants (SPJE). Comme le système de santé cherche à améliorer son efficacité et les résultats de ses interventions, les SPJE doivent tenir compte des récents changements dans les modèles canadiens de prestation de soins primaires, en portant une particulière à l'ensemble des responsabilités des différents professionnels de la santé et au concept de délégation des tâches.

► Cette revue systématique décrit des d'études effectuées en Australie, au Royaume-Uni et aux Pays-Bas, dont les résultats pourraient s'appliquer au système canadien. Parmi les principaux éléments susceptibles d'améliorer l'efficacité du système, mentionnons l'amélioration des compétences professionnelles, le fonctionnement des équipes interprofessionnelles et la maximisation des champs de pratique de tous les membres de l'équipe.

► Certaines initiatives à l'échelle internationale donnent à croire que les MF canadiens pourraient permettre à des infirmières diplômées de prodiguer des SPJE, tout en maintenant une relation thérapeutique avec la famille, lorsque les prestataires de soins travaillent ensemble au même endroit et ont accès aux mêmes dossiers médicaux. Des études et des rapports sur les résultats plus rigoureux devront être effectués afin d'orienter une réforme des SPJE au sein du système canadien de soins primaires.

Le rôle de l'infirmière dans la prestation de soins préventifs aux jeunes enfants

Une revue systématique de la littérature

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Résumé

Objectif Décrire et comparer la prestation des soins préventifs aux jeunes enfants (SPJE) en Australie, au Royaume-Uni et aux Pays-Bas, en insistant sur le rôle des infirmières et sur leur interaction avec les autres soignants du milieu primaire, et ce, afin d'en tirer des leçons pour les équipes interprofessionnelles de santé primaire au Canada.

Sources des données On a consulté MEDLINE, EMBASE et CINAHL à l'aide des rubriques *well child care*, *nursing role*, *delivery of care* et de certains termes analogues. En outre, on s'est servi de Google Scholar pour fouiller la littérature grise; une recherche de bibliographies a identifié quelques articles additionnels.

Sélection des études La recherche initiale a identifié 929 articles. Les critères d'inclusion étaient les suivants: être en rapport avec la prestation de SPJE; porter principalement sur le Canada, les Pays-Bas, le Royaume-Uni, l'Australie ou sur une comparaison entre pays; porter sur des soins à des petits enfants nés à terme et en bonne santé, sur des soins prodigués au sein d'une communauté et sur le rôle de l'infirmière dans la prestation de ces soins. Une révision des résumés suivie d'une révision des textes complets a réduit l'envergure de la recherche à 25 articles.

Synthèse Les articles n'avaient pas tous la même méthode ni la même envergure: c'est pourquoi une synthèse narrative a été effectuée à l'aide d'une analyse thématique. En Australie, aux Pays-Bas et au Royaume-Uni, de nombreuses tâches sont effectuées par des infirmières en santé publique autorisées à l'intérieur d'un système parallèle quoique séparé de la médecine familiale, avec des interactions entre infirmières et MF qui variaient beaucoup entre les divers pays. De façon générale, le rôle des infirmières dans les SPJE demeurait dans les domaines des soins préventifs et du dépistage, incluant la surveillance du développement, des conseils sur la santé et un soutien aux parents. Les trois thèmes prédominants qui ont été trouvés concernaient l'amélioration des compétences professionnelles et la formation, l'intégration des soins et la collaboration interprofessionnelle, et le rôle de l'infirmière dans un système de santé en pleine évolution.

Conclusion Dans le contexte des réformes des soins primaires au Canada, des exemples internationaux donnent à penser qu'il est temps d'envisager un partage accru des rôles dans les SPJE entre les infirmières et des MF au sein des équipes interdisciplinaires des soins primaires.

In Canada, well-child care (WCC) is routinely provided by FPs, pediatricians, and, increasingly, nurse practitioners.^{1,2} Other developed countries have different arrangements for WCC, and there is debate in the literature about how to provide the most effective and efficient WCC.³⁻⁶ Various WCC systems exist, dividing and distributing the activities of WCC between physicians and nurses, and across the public health and primary care systems. Over the past decade, many Canadian provinces have adopted novel models of primary care delivery, such as creating interprofessional primary care teams.⁷ Further, there has been growing attention in Canada to improving the links between the public health and primary care systems.⁸

Although WCC has not attracted the same public attention as many other aspects of primary care have over the past decade, there is nonetheless concern across the country about the capacity of existing providers to meet the demand for WCC.^{1,9-11} As the health system seeks to improve outcomes and efficiency, WCC needs to be considered in light of the evolving models of primary care delivery across Canada, specifically paying attention to health professionals' scopes of practice and the concept of task delegation. This systematic review compared diverse models of WCC in the high-performing primary care systems of the United Kingdom (UK), Australia, and the Netherlands. Although there are many other nations with strong primary care systems, these countries were chosen specifically, as they have long-standing, well established systems of nurse-provided WCC. In addition, in these countries, as in Canada, most people are cared for by FPs or GPs—in contrast to more specialty-driven health care systems such as those of other European nations and the United States.⁴ This review focused specifically on the role of registered nurses (RNs) in providing WCC and their interactions with FPs in an attempt to derive relevant models or lessons for Canada's growing number of interprofessional primary care teams, as well as for more traditional family practices that include physicians and RNs only.

— Methods —

This study conducted a systematic review of the literature using thematic analysis to produce a qualitative synthesis of the findings, as described by Bearman and Dawson.¹² The Bruyère Research Institute Ethics Review Board exempted this study from the need for ethics approval.

Data sources

We searched the Ovid MEDLINE and EMBASE databases, as well as the nursing and allied health database CINAHL. For feasibility purposes, the search was restricted to English, French, or Dutch articles from 1994 to 2016 and used a combination of text words and subject headings that included variations on the key words

well child care, nursing role, and delivery of care. The literature was searched using varying combinations and synonyms of the search terms until the search captured most key articles retrieved in preliminary searches (929 articles). Using the inclusion criteria listed in **Box 1**, a title review and an abstract review were conducted successively. Additional articles were sought through reference mining and searching Google Scholar using the same search terms to find more information on WCC in our chosen countries. Full-text review was completed for 56 articles (**Figure 1**). The data extraction template, which was developed based on the goals of the study and a preliminary review of the literature by the team, was pilot-tested by all team members with 3 articles to ensure agreement in interpretation and application of the tool, and double data extraction was completed independently by 2 team members (J.T., J.V.) for a randomly selected 14% (8 out of 56) of the articles for quality assurance.¹³ As we were collecting descriptive data, not quantitative data, our focus was on ensuring appropriate interpretation of studies and proper application of the extraction template. Near-complete agreement was achieved with no important differences in data or coding, so each remaining article was reviewed by the same author (J.V.). The 2 other team members (S.J., J.T.) reviewed all the extracted data for completeness and accuracy and any perceived discrepancies were discussed with reference to the original source until all 3 reviewers reached consensus. The included studies were heterogeneous in their methodologies, thus the validity of the studies was not assessed.

— Synthesis —

The literature review produced an array of article types. Nineteen articles were primary research studies, largely qualitative studies exploring nurses' and other professionals' perspectives on WCC delivery approaches, with only 1 article reporting on a large controlled before-and-after trial of nurse-provided WCC. Four articles were literature

Box 1. Inclusion and exclusion criteria

Inclusion criteria

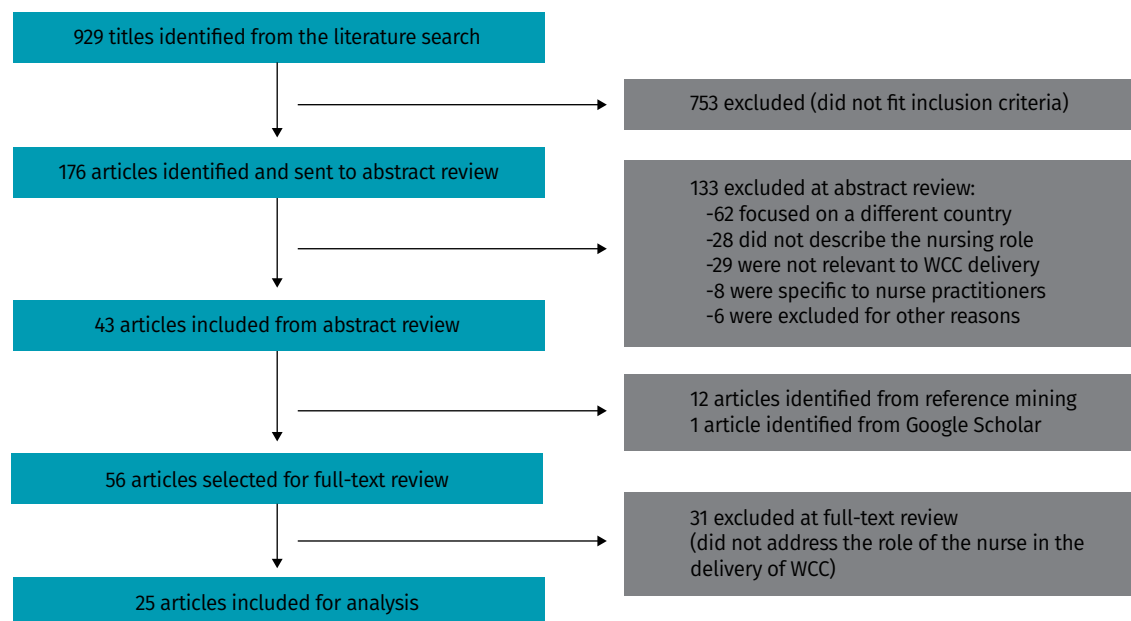
- Relevant to WCC delivery
- Focus is on Canada, the Netherlands, the UK, Australia, or an international comparison
- Describes care of healthy term infants
- Describes care provided in the community
- Describes the role of the nurse in WCC delivery

Exclusion criteria

- Specific focus on a different country (eg, US)
- Focus on telehealth or group WCC
- Focus on nurse practitioners

UK—United Kingdom, US—United States, WCC—well-child care.

Figure 1. Article selection



WCC—well-child care.

or scoping reviews, and 2 articles were discussion papers. By far most of the selected articles focused on Australia. Of the 25 articles included, 17 were Australian, 3 were from the UK, 1 was from the Netherlands, and the other 4 included 2 international comparisons (including Canada), 1 review of Canadian and American literature, and 1 Canadian publication describing experiences in the Netherlands. A detailed description of the reviewed studies, including the main outcomes and conclusions, can be found in **Table 1**.^{4,14-37}

In both the UK and Australia, public health nurses (RNs) with special training provide WCC, either independently or working out of FPs' offices (referred to as *practice nurses*). In the Netherlands, there is a long-standing tradition of child health doctors and RNs working as a team in growth and development clinics (*consultatie-bureaus*), which are separate from FPs' practices, and where visits alternate between the nurse and the doctor.³⁵ A recent feasibility study from the Netherlands, however, compared care provided in this traditional way to WCC provided exclusively by nurses (for children aged 2 months to 3 years) and found that the care was comparable, except that parents perceived a lack of continuity of care from nursing-only care.³⁴ Interestingly, based on this study, the Dutch WCC system is changing to this model of nurse-only WCC (S.J. Benjamins, H.F. van Stel, verbal communication, February 2016) for a large region that includes about 30 000 children.

Our analysis identified a range of WCC activities carried out by nurses, including preventive care and screening, monitoring development, and providing health education and support to parents. Across the literature from each country, 3 recurrent themes emerged: the importance of professional development (PD) and education for nurse WCC delivery, integration of care and interprofessional collaboration, and the changes in nurses' roles within evolving health systems.

Professional development and education

The extent of PD and training offered to nurses, and the effect that an increase in educational opportunity can have on the success of nurse-provided WCC,²⁹ was frequently raised in intervention study discussions, review papers, and policy discussions. Educational opportunities described in the studies ranged from nurses completing a single skills-development session to formal postgraduate certificates or degrees, with general agreement that an increase in nurses' training beyond their basic competencies is an important feature in effective WCC interventions.^{22,36} In the Dutch intervention study, the study nurses were offered a 5-day course in WCC and examination skills, and also received coaching from child health physicians for 4 more months, with gradual task delegation; the physicians received a 1-day coaching workshop.³⁴

Table 1. Description of studies and reviews examining the role of RNs in the provision of WCC

STUDY	COUNTRY	DOCUMENT TYPE	DESIGN	INTERVENTION OR FOCUS	OUTCOMES OR CONCLUSION
Australia					
Mbwili-Muleya et al, 2000 ¹⁴	Australia	Primary research	Quantitative analysis; postal survey	Explore the level of contact that FPs have with MCH nurses when dealing with families in the postnatal period; describe the content of and FPs' views on this communication (N = 715 FPs)	Although fewer than half of the FPs reported contact with MCH nurses in the previous month, most who did found this communication to be helpful
Barnes et al, 2003 ¹⁵	Australia	Primary research	Explorative descriptive study; case studies and focus groups	Assess the common services provided by CHNs in the Brisbane area and the effect that changes in the health system have had on CHN practice; explore nurses' views on these changes (N = 22 nurses)	The main focus of CHN services to provide support and guidance to families remains the same, but is enacted differently, with a shift from universal to targeted programs. Challenges include lack of input from nurses into service development and the changing nurse-client relationship
Barnes et al, 2004 ¹⁶	Australia	Primary research	Explorative descriptive study; focus group discussion and workshop to consider the findings	Examine CHN roles, responsibilities, and PD needs (N = 22 nurses)	Four main roles were identified: supportive and nurturing; health education and promotion; resources and referral; and assessment and monitoring. Role changes consisted of increased group sessions, home visits, and planned programs. Need for increased PD is emphasized
Briggs, 2006 ¹⁷	Australia	International literature review	Narrative content analysis	A literature review to "describe and compare the practices of community CHNs when engaging with their clients, as depicted in the international literature" ³³	Internationally, CHNs work to create a relationship of mutual trust and connectedness with families (specifically mothers); this is accomplished by having personal qualities of being empathetic, caring, reliable, genuine, and warm
Bryant et al, 2016 ¹⁸	Australia	Primary research	Qualitative, descriptive study; semistructured interviews	To explore MCH nurses' practice of evaluating and facilitating caregiver-infant attachment, identifying factors that influence their practice (N = 12 nurses)	Five key themes were found: personal (emotions and attitudes), workplace (opportunities and challenges), knowledge (meaning of attachment and PD), intervention (observational, collaborative, and reflective skills), and skills (promotion of attachment, strategies, and services)
Kruske et al, 2006 ¹⁹	Australia	Primary research	Qualitative analysis; semistructured interviews	Explore the effects of policy documents on CFH nursing practice, describe the role of CFH nurses, and describe factors that influence the effectiveness of CFH nurses (N = 33 nurses)	Nurses continue to use an "expert" approach in their practice despite a policy shift toward the partnership model. Age of nurses, educational level, and the management systems in place all help explain the tension between policy and practice

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STUDY	COUNTRY	DOCUMENT TYPE	DESIGN	INTERVENTION OR FOCUS	OUTCOMES OR CONCLUSION
Rowe and Barnes, 2006 ²⁰	Australia	Primary research	Narrative inquiry; interviews and journal entries	Explore the role and usefulness of CHNs in aiding middle-class women, who are not considered a priority for targeted health services, navigate the transition into motherhood (N = 21 mothers)	Nurses play an important role in helping new mothers gain competence, by promoting interactive health literacy and supporting mothers as they develop a sense of maternal identity
Rush, 2012 ²¹	Australia	Primary research	Qualitative; in-depth interviews	Explore the role that MCH nurses play in dealing with women with postpartum depression (N = 8 nurses)	Nurses play an important role in screening mothers for postpartum depression and they feel confident doing so; however, their role is limited to referrals rather than diagnosis or treatment
Barbaro et al, 2011 ²²	Australia	Discussion	Discussion of the Social Attention and Communication Study	MCH nurses trained for 2.5 hours to identify atypical infant development and to raise concerns with parents of at-risk children, followed by referral to an expert team (N = 241 nurses)	Nurses are capable of performing accurate developmental surveillance, as demonstrated by the high ascertainment rate for ASD and developmental delay through the nurse screening protocol. This is within the nurses' scope of practice in systems such as the MCH centres in Victoria
Borrow et al, 2011 ²³	Australia	Primary research	Descriptive, qualitative study; diary entries and focus groups	Explore the current practice of CHNs in Western Australia (N = 51 nurses)	CHNs play a large and multifaceted role in child health, and the role is continuously in flux. Diary analysis showed the most-documented outcome of a visit was related to health promotion; the most common reason for a visit was developmental screening. Focus group analysis themes included working in partnership with families, challenges to practice (working alone, time constraint, lack of resources), and disappointment with lack of clinical supervision and staff development
Hooker et al, 2012 ²⁴	Australia	International scoping review	Descriptive summary and thematic analysis	Explore the role of the nurse in domestic violence screening in the setting of WCC as described in the international literature (N = 17 articles)	Outcomes included barriers to domestic violence screening, including a lack of privacy, knowledge, education, and resources, and enablers such as ongoing education, clinical guidelines, support, and access to debriefing. There was a limited focus on the effect on children at risk. Overall, there is limited international discussion on domestic violence screening during WCC

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STUDY	COUNTRY	DOCUMENT TYPE	DESIGN	INTERVENTION OR FOCUS	OUTCOMES OR CONCLUSION
Jeyendra et al, 2013 ²⁵	Australia	Primary research	Qualitative, descriptive study; face-to-face interviews	Explore the role of the FP in the greater western Sydney area in providing preventive services to well children and families (N = 23 FPs)	FPs' role in preventive WCC is mainly "opportunistic rather than proactive," largely owing to constraints on FPs' time. FPs require further PD and could benefit from increased collaboration with WCC services such as the MCH nursing service
Laws et al, 2015 ²⁶	Australia	Primary research	Qualitative, descriptive study, mixed methods; survey and semistructured interviews	Examine the child obesity prevention practices of MCH nurses, explore the key factors influencing such practices, and identify opportunities to enhance and support MCH nurses in this role (N = 56 surveys, 16 interviews)	MCH nurses frequently monitor growth and address infant feeding; are less likely to use growth charts, promote active play, and advise about limiting sedentary behaviour. Drivers of practice behaviour include parental receptiveness and maintaining rapport
Robinson et al, 2013 ²⁷	Australia	Primary research	Qualitative study; questionnaire and semistructured interviews	Assess the role of PNs in addressing childhood obesity prevention, including nurses' attitudes and barriers to practice (N = 59 PNs)	PNs are interested in childhood obesity prevention; however, barriers to practice exist, including a lack of confidence in this area, which could be addressed with further training. The Healthy Kids Check provides an ideal opportunity for nurse-provided obesity prevention
Sarkadi et al, 2015 ²⁸	Australia	Primary research	Qualitative study; cross-sectional questionnaire	Evaluating MCH nurses self-perceived comfort, competency, attitudes, and difficulties in dealing with child behaviour problems in their clinics (N = 153 surveys)	Most nurses felt comfortable and competent with broaching the subject and discussing child behaviour, but fewer felt comfortable or competent with managing problems. Most nurses felt it was their role to deal with problems rather than refer. Main barriers were parental denial and resistance. Greater nursing experience led to increased comfort and competence
Walsh and Mitchell, 2013 ²⁹	Australia	Primary research	Integrated mixed methods; self-report survey	Explore the role of PNs in child health and development. Describe responsibilities, PD needs, barriers, facilitators, and role satisfaction of PNs in this area (N = 29 PNs)	PNs are ideally placed to assist new parents in adapting to their new role and to provide child health and development support to those unable to access child health services. PNs are interested in expanding their role into this area; however, there is a need for additional education and PD
Schmied et al, 2014 ³⁰	Australia	Primary research	Descriptive statistics and content analysis; surveys	Describe the extent of the CFH nursing service across Australia, including the ages and circumstances of the families as well as the nature and frequency of the CFH services provided (N = 1098 nurses)	Most nurses reported providing universal prevention services and meeting policy goals of making first contact with families within 2 to 4 weeks of birth. Barriers include time constraints, lack of resources, and lack of support; facilitators include supportive management and team, and PD support

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STUDY	COUNTRY	DOCUMENT TYPE	DESIGN	INTERVENTION OR FOCUS	OUTCOMES OR CONCLUSION
UK					
Hampshire et al, 2001 ³¹	UK	Primary research	Descriptive, qualitative study; semistructured interviews and analysis of child health records	Assess what HVs and FPs think are the most important child health promotion issues and describe the content of child health surveillance reviews in the first year of life, as recorded in child health records (N = 28 FPs, N = 28 HVs)	Both HVs and FPs agree that HVs are the most important practitioner to discuss child health promotion with families, and HVs were shown to provide more health promotion than FPs. Overall, health promotion in the first year of life is not well recorded in child health records
Halpin and Nugent, 2007 ³²	UK	Primary research	Small-scale qualitative, inductive, interpretive study; semistructured interviews	Explore how HVs view their role in dealing with families who have children with ASD (N = 11)	HVs perceived their role to be in recognizing atypical development and providing continuous support to the family. They thought that “developmental surveillance should continue, and they wanted further training and tools to aid in identifying atypical development” ²²
Condon, 2008 ³³	UK	Primary research	Cross-sectional survey; postal questionnaire	Assess to what extent national child health promotion policy is reflected in HVs’ practice across the UK (N = 1043 questionnaires)	Local policy on the Child Health Promotion Programme does not consistently reflect national recommendations, as large numbers of HVs continue to offer a more comprehensive service to children. Findings suggest that practitioners can mediate the structure and content of programs delivered
Other					
Benjamins et al, 2015 ³⁴	Netherlands	Primary research	Controlled before-and-after study, qualitative and quantitative	Nursing competences; percentage of children assigned to nursing-only care; change in the number of abnormal findings and referrals with new working method; and experiences of professionals and parents with the new working method (N = 1997 children)	There was a significant increase in medical screening skills ($P < .001$) and no change in perceived general nursing competences. Overall, 69% of children were assigned to nurse-only care. There was no significant change in abnormal findings or referrals between experiment and control teams, except for hips ($P = .034$ and $P = .035$ for findings and referrals, respectively). Nurses and doctors perceived changes as positive, with some recommendations for improvement. Parents were generally happy, but thought there was a lack of continuity of care with the new method

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STUDY	COUNTRY	DOCUMENT TYPE	DESIGN	INTERVENTION OR FOCUS	OUTCOMES OR CONCLUSION
Van Stralen, 1999 ³⁵	Netherlands (Canadian publication)	Discussion	Personal reflection	Describe the structure and components of the system of preventive pediatric care in rural Netherlands	The Dutch system “offers a great deal of support and individualized care” ¹⁵ for the well child through growth and development clinics that are disconnected from FPs. Care is provided by nurses and child health doctors at these clinics who collaborate as a team
Kearney et al, 2000 ³⁶	US and Canada	Literature review	Systematic qualitative evaluation	Assess the effect that nurse-delivered interventions have on vulnerable young families and describe features of successful interventions (N = 20 studies)	Nurse-delivered home visits, on top of usual care, can have positive effects in maternal health, parenting skills, and maternal-child interaction, with limited improvement in child health and development and no improvement in use of WCC. Effective interventions used well-educated nurses, began in pregnancy, and lasted > 1 year with frequent visits, and focused on building trust
Kuo et al, 2006 ⁴	International	International comparison	Literature review and international experts	Describe the different structures and practices of WCC in 10 countries and compare with the US (N = 10 countries)	Some similarities exist; however, there are key structural differences in WCC among the 10 countries. In most countries, health promotion is separate from acute care, and the notion of a primary care provider as a “medical home” (as in the US) does not exist
Kuo et al, 2009 ³⁷	International	Primary research	Structured interviews and case vignettes	Describe how “early child development services are provided in other countries in comparison with the [US]”; explore the roles of different health professionals (N = 20 child health experts from 10 countries)	The responsibility of providers in WCC is different across the board, with many countries relying on the nurse for most WCC, with the FP or pediatrician more involved when there is a problem

ASD—autism spectrum disorder, CFH—child and family health, CHN—child health nurse, FP—family physician or general practitioner, HV—home visitor, MCH—maternal-child health, RN—registered nurse, PN—practice nurse, PD—professional development, UK—United Kingdom, US—United States, WCC—well-child care.

When asked their opinions about the necessity of PD, nurses frequently highlighted the need for more PD opportunities.^{16,23,27,29,32} This included wanting more training around specific skills such as obesity prevention and domestic violence screening^{24,26,27} or, more broadly, requiring ongoing education in order to keep up with current evidence-based practices.¹⁶ Although most studies reported nurses being interested in further training opportunities, barriers to the implementation of ongoing PD were also described in some studies, with time constraints being the most prominent challenge, as nurses are busy with high workloads alongside external commitments.^{19,29}

Integration of care and interprofessional collaboration

Many of the studies described the level of interaction between nurses and FPs providing WCC, with numerous studies finding a disconnect between providers. A 2006 international comparison of WCC found that “most countries seem to assign little value to coordination between different care providers.”⁴ Although often lacking in practice, the benefits of and desire for a multidisciplinary approach to WCC were repeatedly raised.²³ Benefits such as facilitated referrals and improved capacity to manage conditions such as postpartum depression were thought to arise from either a

co-located multidisciplinary team or increased familiarity between nurses and FPs.^{16,21}

The same 2006 comparison described Australia as having little coordination between maternal-child health nurses and FPs, whereas in England there was greater coordination when home visitors (the RNs who provide WCC in the UK) were attached to the FP's office.⁴ In both countries, co-location of nurses and FPs was described as enabling stronger relationships between nurses and FPs in WCC delivery. In the UK, home visitors increasingly work from FP premises, and in Australia, the role of the nurse working within general practice is also expanding.^{23,25,29,31}

Nurses' role in an evolving health system

The concept of the dynamic nature of the nursing role was prevalent throughout the literature. In papers from the UK, a common theme was a shift from universal to targeted nurse-provided child health services, mainly to focus on children and families with higher needs.^{33,38} In addition to nurses focusing more on higher-needs families, the role was also described as expanding to include more tasks.^{18,26} Child health nurses in Australia saw their role broadening owing to the "abolishment of other health and support agencies,"²³ and practice nurses in Australia were beginning to take on preventive pediatric care through opportunities such as the Healthy Kids Check.^{27,29} A recurrent theme when discussing the evolution of the nurse's role was the importance of nursing input on change^{15,16,33} and how the lack thereof can hinder successful implementation of new practices.

The provision of psychosocial support for families was increasingly a key aspect of WCC provided by nurses.^{16,17,23,28,34} In interviews with child and family health nurses in Australia, this shift was described as "a change in focus from that of the baby to the entire family with an increase in the psychosocial effects on family functioning and health."¹⁹ One report suggested this shift is because there is an overall decrease in available social resources and nurses are filling in to support children and families.²²

— Discussion —

This literature review revealed diverse and illustrative practices in WCC in several countries with well developed primary care systems, similar to those in Canada. The Netherlands, the UK, and Australia all have dedicated systems for WCC, where RNs with some specialty training perform most of the WCC tasks. In Canada, although few nurses provide WCC independently, RNs receive teaching on most of the components of WCC during their training, and enrichment in primary care nursing is available.³⁹ Canadian health care providers could learn a number of things

from their international colleagues in the field of WCC, not by completely overhauling our system to match that of the studied countries, but rather by recognizing the opportunity to adapt our system to enable and allow RNs to perform WCC in the primary care setting. Literature about work force issues in primary care points to a growing trend of nurses taking on tasks previously completed by physicians to increase capacity and maximize efficiency, and WCC in Canada seems to be a field perfectly poised to undergo task delegation.^{34,40} The recurrent themes emerging from this review, including the ongoing need for nurse PD to adapt to new roles, the need for collaborative and integrated practice between nurses and FPs providing WCC, and the context of evolving health systems, should inform any potential delegation of the provision of WCC from physicians to nurses.

Many FPs already work with nurses in their delivery of primary care and could consider delegating or sharing WCC with these nurses. The repeated concerns over strong relationships between nurses and FPs for optimal care highlight that a high degree of collaboration would be most effective. Canada's inter-professional primary care teams already have features in place that are likely to improve working relationships between FPs and practice nurses—namely co-location of the 2 professions, often with other health care professionals delivering primary care, as well as shared communication systems. Finally, collaborative arrangement between nurses and FPs in delivering WCC must recognize the importance of continuity of care for children and their families, reported as a finding in the before-and-after study in the Netherlands showing comparable care but parent dissatisfaction with a lack of continuity.³⁴

Nurses' roles in WCC are evolving—to both focus more on higher-needs patients and place greater emphasis on psychosocial care—in the context of larger system trends, also seen in Canada. In the Netherlands, for example, the standard basic "basket of services" offered to children as part of routine WCC has recently undergone a "demedicalization" shift, aiming to increase the focus on and engagement with social resources.⁴¹ Similarly, in the UK, the standard WCC has been shifting to place greater emphasis on resources for social support for more vulnerable children.^{38,42} The trend across countries of distributing WCC resources according to need might reflect diminishing medical resources for WCC, as needs within the health system increase elsewhere, particularly to meet the needs of an aging population. However, pressures from rising costs and searches for greater efficiency in delivering care can create opportunities to reconsider the way care is delivered and to maximize the scopes of practice of all health professionals delivering care. Moreover, the growing role of nurses in providing psychosocial care as part of WCC might also reflect an

increased recognition of the health effects and long-term costs of psychosocial determinants of health on the lives of infants and young children.

Limitations

Our literature search had several limitations. As echoed in an Australian policy paper,⁶ very few articles specifically focus on the provision of WCC, and only 1 recent article described outcomes of WCC compared with different methods of care delivery. Moreover, there were no articles that focused exclusively on the Canadian context. We limited ourselves to 4 countries with similar health care systems, but future searches might review additional countries, and papers written in different languages, to see if innovative WCC practices might be relevant or transferable to the Canadian system. Last, this field of pediatric care remains relatively unaddressed in the literature, so the number of articles was small and they used diverse methods and were of variable quality.

Conclusion

This paper describes initial findings in a burgeoning field. Common themes, which clearly link to health system trends in Canada, were identified. These include the function of interprofessional teams and maximizing scopes of practices of all team members for greater efficiency. International examples suggest Canadian FPs could give RNs the opportunity to provide WCC, while maintaining a therapeutic relationship with the family, if the providers work together in the same location and share the same medical records. More rigorous study and reporting of outcomes should be done to guide reform efforts of WCC in the Canadian primary care system.

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Contributors

All authors contributed to the concept and design of the study; data gathering, analysis, and interpretation; and preparing the manuscript for submission.

Competing interests

None declared

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References

1. Jaakimainen L, Upshur REG, Klein-Geltink JE, Maaten S, Schultz SE, Leong A, et al, editors. *Primary care in Ontario: ICES atlas*. Toronto, ON: Institute for Clinical Evaluative Sciences; 2006.
2. Guttman A, Shipman SA, Lam K, Goodman DC, Stukel TA. Primary care physician supply and children's health care use, access, and outcomes: findings from Canada. *Pediatrics* 2010;125(6):1119-26. Epub 2010 May 24.
3. Tanner JL, Stein MT, Olson LM, Frintner MP, Radecki L. Reflections on well-child care practice: a national study of pediatric clinicians. *Pediatrics* 2009;124(3):849-57.
4. Kuo AA, Inkelas M, Lotstein DS, Samson KM, Schor EL, Halfon N. Rethinking well-child care in the United States: an international comparison. *Pediatrics* 2006;118(4):1692-702.
5. Coker TR, Thomas T, Chung PJ. Does well-child care have a future in pediatrics? *Pediatrics* 2013;131(Suppl 2):S149-59.
6. McLean K, Goldfeld S, Molloy C, Wake M, Oberklaid F. *Screening and surveillance in early childhood health: rapid review of evidence for effectiveness and efficiency of models*. Melbourne, Aust: Murdoch Children's Research Institute; 2014.
7. Hutchison B, Levesque JF, Strumpf E, Coyle E. Primary health care in Canada: systems in motion. *Milbank Q* 2011;89(2):256-88.
8. Martin-Misener R, Valaitis R, Wong ST, Macdonald M, Meagher-Stewart D, Kaczorowski J, et al. A scoping literature review of collaboration between primary care and public health. *Prim Health Care Res Dev* 2012;13(4):327-46. Epub 2012 Feb 21.
9. Katz A, Bogdanovic B, Ekuma O, Soodeen RA, Enns J. Pediatric primary care services in Manitoba: is the health of the next generation of children at risk? *Health Policy* 2012;105(1):84-91. Epub 2012 Feb 1.
10. College of Family Physicians of Canada, Royal College of Physicians and Surgeons of Canada, Canadian Medical Association. *National Physician Survey, 2010. National results by FP/GP or other specialist, sex, age and all physicians. I (physician) offer*. Mississauga, ON: College of Family Physicians of Canada; 2010. Available from: <http://nationalphysiciansurvey.ca/wp-content/uploads/2012/07/2010-NationalFP-Q15.pdf>. Accessed 2015 Mar 26.
11. College of Family Physicians of Canada, Royal College of Physicians and Surgeons of Canada, Canadian Medical Association. *National Physician Survey, 2010. National results by FP/GP or other specialist, sex, age and all physicians. I provide health care for these patients*. Available from: <http://nationalphysiciansurvey.ca/wp-content/uploads/2012/07/2010-NationalFP-Q16.pdf>. Accessed 2015 Mar 26.
12. Bearman M, Dawson P. Qualitative synthesis and systematic review in health professions education. *Med Educ* 2013;47(3):252-60.
13. Institute of Medicine. *Finding what works in health care: standards for systematic reviews*. Washington, DC: National Academies Press; 2011.
14. Mbuii-Muleya C, Gunn J, Jenkins M. General practitioners: their contact with maternal and child health nurses in postnatal care. *J Paediatr Child Health* 2000;36(2):159-63.
15. Barnes M, Courtney MD, Pratt J, Walsh A. Contemporary child health nursing practice: services provided and challenges faced in metropolitan and outer Brisbane areas. *Collegian* 2003;10(4):14-9.
16. Barnes M, Courtney MD, Pratt J, Walsh AM. The roles, responsibilities and professional development needs of child health nurses. *Focus Health Prof Educ* 2004;6(1):52-63.
17. Briggs C. Nursing practice in community child health: developing the nurse-client relationship. *Contemp Nurse* 2006;23(2):303-11.
18. Bryant, E, Ridgeway, L, Lucas, S. Attachment icebergs: maternal and child health nurses' evaluation of infant-caregiver attachment. *Community Pract* 2016;89(5):39-43.
19. Kruske S, Barclay L, Schmied V. Primary health care, partnership and polemic: child and family health nursing support in early parenting. *Aust J Prim Health* 2006;12(2):57-65.
20. Rowe J, Barnes M. The role of child health nurses in enhancing mothering know-how. *Collegian* 2006;13(4):22-6.
21. Rush P. The experience of maternal and child health nurses responding to women with postpartum depression. *Matern Child Health J* 2012;16(2):322-7.
22. Barbaro J, Ridgway L, Dissanayake C. Developmental surveillance of infants and toddlers by maternal and child health nurses in an Australian community-based setting: promoting the early identification of autism spectrum disorders. *J Pediatr Nurs* 2011;26(4):334-47. Epub 2010 Jun 23.
23. Borrow S, Munns A, Henderson S. Community-based child health nurses: an exploration of current practice. *Contemp Nurse* 2011;40(1):71-86.
24. Hooker L, Ward B, Verrinder G. Domestic violence screening in maternal and child health nursing practice: a scoping review. *Contemp Nurse* 2012;42(2):198-215.
25. Jeyendra A, Rajadurai J, Channugam J, Trieu A, Nair S, Baskaran R, et al. Australian general practitioners' perspectives on their role in well-child health care. *BMC Fam Pract* 2013;14:2.
26. Laws R, Campbell KJ, van der Pligt P, Ball K, Lynch J, Russell G, et al. Obesity prevention in early life: an opportunity to better support the role of maternal and child health nurses in Australia. *BMC Nurs* 2015;14(26):1-14.
27. Robinson A, Denney-Wilson E, Laws R, Harris M. Child obesity prevention in primary health care: investigating practice nurse roles, attitudes and current practices. *J Paediatr Child Health* 2013;49(4):E294-9.
28. Sarkadi A, Gulenc A, Hiscok H. Maternal and child health nurses' self-perceived confidence in dealing with child behaviour problems. *Child Care Health Dev* 2015;41(2):324-8. Epub 2014 May 25.
29. Walsh A, Mitchell AE. A pilot study exploring Australian general practice nurses' roles, responsibilities and professional development needs in well and sick child care. *Neonatal Paediatr Child Health Nurs* 2013;16(2):21-6.
30. Schmied V, Fowler C, Rossiter C, Homer C, Kruske S, CHORUS team. Nature and frequency of services provided by child and family health nurses in Australia: results of a national survey. *Aust Health Rev* 2014;38(2):177-85.
31. Hampshire AJ, Blair ME, Crown NS, Avery AJ, Williams I. Infant and pre-school health promotion: what do health visitors and general practitioners think is important and what do they record? *Ambul Child Health* 2001;7(3/4):191-201.
32. Halpin J, Nugent B. Health visitors' perceptions of their role in autism spectrum disorder. *Community Pract* 2007;80(1):18-22.
33. Condon L. Child health promotion in the United Kingdom: does health visitors' practice follow policy? *J Adv Nurs* 2008;62(5):551-61.
34. Benjamins SJ, Damen MLW, van Stel HF. Feasibility and impact of doctor-nurse task delegation in preventive child health care in the Netherlands, a controlled before-after study. *PLoS One* 2015;10(10):e0139187.
35. Van Stralen JPM. Preventive care paediatrics in the Netherlands—a medical student's experience. *Paediatr Child Health* 1999;4(6):391-3.
36. Kearney MH, York R, Deatrick JA. Effects of home visits to vulnerable young families. *J Nurs Scholarsh* 2000;32(4):369-76.

37. Kuo AA, Inkelas M, Maidenberg M, Lotstein DS, Samson KM, Halfon N. Pediatricians' roles in the provision of developmental services: an international study. *J Dev Behav Pediatr* 2009;30(4):331-9.
38. Wood R, Stockton D, Brown H. Moving from a universal to targeted child health programme: which children receive enhanced care? A population-based study using routinely available data. *Child Care Health Dev* 2013;39(6):772-81. Epub 2012 Aug 15.
39. Halper N. *Primary solutions for primary care*. Toronto, ON: Registered Nurses' Association of Ontario; 2012. Available from: <http://rmao.ca/policy/reports/primary-solutions-primary-care>. Accessed 2015 Dec 4.
40. Bodenheimer T, Bauer L. Rethinking the primary care workforce: an expanded role for nurses. *N Engl J Med* 2016;375(11):1015-7.
41. *Nederlands Centrum Jeugdgezondheid* [website]. Utrecht, Netherlands: Nederlands Centrum Jeugdgezondheid. Available from: www.ncj.nl. Accessed 2015 Mar 26.
42. *Best practice for a sure start: the way forward for children's centres. Report from the All Party Parliamentary Sure Start Group*. Baltimore, MD: 4Children; 2013. Available from: www.basw.co.uk/resource/?id=2259. Accessed 2015 Mar 25.

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