

ARHP Commentary — Thinking (Re)Productively

Challenges of implementing task-shifting in contraceptive care — an experience in Quebec, Canada[☆]

Edith R. Guilbert^{a,*}, Jean Robitaille^b, Alexis C. Guilbert^a,
Diane Morin^c, the Group of experts in Family Planning of
the National Institute of Public Health of Quebec^a

^aNational Institute of Public Health of Quebec, Quebec City, Quebec, Canada

^bDepartment of Agribusiness and Consumer Sciences, Laval University, Quebec City, Quebec, Canada

^cUniversity Institute of Graduate Studies and Research in Care, IUFERS, University of Lausanne, Lausanne, Switzerland

Received 26 June 2013; accepted 20 July 2013



This monthly commentary is contributed by the Association of Reproductive Health Professionals to provide expert analysis on pressing issues in sexual and reproductive health. Learn more at www.arhp.org.

Societal and demographic changes have presented numerous healthcare challenges that demand innovative solutions. Task shifting, a process whereby specific tasks are transferred to health workers with shorter training and fewer qualifications, is expected to make more efficient use of existing human resources and ease bottlenecks in service delivery [1]. This has been a longstanding practice in the field of family planning with studies in the late 1960s demonstrating that nurses could insert intrauterine devices (IUDs) as well as physicians [2]. Subsequent studies across multiple countries have further supported the safety and efficacy of various types of health workers (community health workers, pharmacists, nurses, etc.) in managing hormonal contraceptives, inserting IUDs, providing pre/post-natal care, and performing deliveries or abortions [3–15]. In 2002, the province of Quebec passed Bill 90 allowing

task shifting between different health professionals in an effort to address the paucity of medical resources [16]. The first provincial application of this law came in 2007 with the Quebec model of Collaborative Agreement in Hormonal Contraception (CAHC) [17], which grew out of a 5-year negotiation process involving the College of physicians (CMQ), the College of Nurses (OIIQ), the College of Pharmacists (OPQ) and the National Institute of Public Health of Quebec (INSPQ). This model established a mechanism by which a trained nurse, in collaboration with a community pharmacist, can prescribe hormonal contraception (i.e., combined oral contraceptives, contraceptive patch and ring, progestin only pills and injectable contraceptives) to healthy women of reproductive age for a 6-month period without a medical consultation. For example, a 16-year-old adolescent who desires hormonal contraception can visit her school nurse who will assess her health, body mass index, blood pressure and risk of pregnancy and provide her with counseling on all contraceptive methods. In the absence of an absolute or relative contraindication, the nurse will tailor her counseling to the chosen contraceptive method and give the woman a prescription-like form (liaison form) identifying the recommended contraceptive method

[☆] Disclaimer: The views expressed in this editorial are solely those of the authors and do not necessarily reflect the opinions or views of the Association of Reproductive Health Professionals or its representatives.

* Corresponding author. Institut national de santé publique du Québec – 945, Ave Wolfé, Quebec City, Quebec, Canada, G1V 5B3. Tel.: +1 418 650 5115x5504; fax: +1 418 654 3210.

E-mail address: edith.guilbert@inspq.qc.ca (E.R. Guilbert).

which can be obtained from a local pharmacy of her choice for a period of up to 6-months. Within this time, the young woman can obtain a prescription renewal from a physician.

Because of various legal constraints and with the aim of promoting interdisciplinary collaboration as recommended by the World Health Organization [18], the CMQ requires that physicians of each health organization agree on their own independent local CAHC. Thus, the provincial model serves as a guide that can be adapted locally. A copy of each local CAHC must be sent to the OPQ in order for community pharmacists to verify that the liaison forms they receive are related to reliable local CAHCs (www.inspq.qc.ca/contraception).

Since 2007, more than 4 000 nurses targeted by CAHCs have received training in hormonal contraception. The traditional training program consisted of a 7-h course given by two trainers (one physician and one nurse). In 2009, the CAHC model was updated [19] according to new eligibility criteria for contraceptive use [20] and became a 10-hour e-learning accredited program. Recently, a 2012 update of the CAHC model [21] allows nurses and pharmacists to start women on hormonal contraception for up to 1 year without a medical consultation and enables them to provide the initial consultation and prescription of an IUD prior to insertion by a physician or a nurse-practitioner.

Implementing such an innovative service delivery model is not without challenges and barriers. The initial experience included resistance from physicians and targeted professionals. Fear of losing an easy clientele or the reverse, worry about gaining more clientele, lack of confidence in nurses' and pharmacists' competency in evaluating women's health, and a broad global resistance to change were barriers expressed by physicians. Barriers from both nurses and pharmacists also related to a strong resistance to change and reluctance about additions to existing workload. Such barriers combined with bureaucratic challenges may explain why it took at least 5 years to have CAHCs in 95% (89/94) of Health and Social Service Organizations (CSSS) and in 22% of Groups of Family Medicine. To overcome these obstacles, it was necessary to build a team of regional facilitators in each regional Direction of Public Health. This team was supported by the resource team of INSPQ and by champions (mostly physicians) who gave presentations on hormonal contraception and introduced the benefits of CAHCs across the province of Quebec. In addition, educational materials were developed (www.inspq.qc.ca/contraception) and over the course of several years, articles on contraception were regularly published in the main provincial nursing journal [22].

Unexpectedly, the requirement that physicians should adopt their own local CAHC and could adapt the provincial model and its updates was proved to be a major barrier. In 2010, a INSPQ audit was performed on 85 organizations that had adopted a local CAHC [23]. In summary, only 7.5% of local CAHCs were in complete compliance with the 2009 model. Another 24% of audited CAHCs required adjust-

ments but were deemed safe as their list of contraindications was up-to-date. However, more than two thirds of local CAHCs (68.5%) were judged as inadequate. Within this category, half of them had not been updated to the then-current 2009 model and, thus, lacked certain new contraindications. Others included additional contraindications limiting the targeted increase to access to contraceptive care. Many CAHCs did not allow for either the initiation of certain contraceptive methods/products or restricted the period of prescription to less than 6 months. As stated by several international organizations, adaptive strategies and flexibility are important elements of success in scaling up innovation [24–27]. Flexibility makes it possible to simplify approaches to intervention and adapt the innovation to the local context and its learning process. But, flexibility has its drawbacks. The challenge lies in recognizing when flexibility and adaptation have exceeded their limits [26]. In the case of the CAHC model, identifying the most recent contraindications to contraceptive methods as well as including all targeted products is central to the program's success and these targets must be maintained intact in order to improve access to safe hormonal contraception. Deviations from the model were primarily related to difficulties physicians had in complying with the provincial model inasmuch as they were the ones who agreed on their local CAHCs. As shown in several publications [28,29], even though practical guidelines are based on scientific evidence, the quality of evidence is just one aspect upon which physicians base their decisions. Other factors such as personal knowledge, attitudes, motivation and context of practice can greatly influence adherence to a model [29,30]. In other settings, comparable programs have been less than optimal for reducing caesarean sections [31], controlling asthma [32], standardizing suture material in general surgery [33] or using low-cost antibiotics for first ear infections [34]. To address these shortfalls, auditors provided specific feedback to each audited organization. However, these results indicate the need for repeated and ongoing monitoring.

A third major barrier was the translation of teaching into practice: In several domains, training does not always translate into practice [35–40]. According to a recent evaluation process amongst more than 3000 Quebec nurses trained in hormonal contraception [41], more than half of them (57.3%), mostly those working in youth clinics of CSSS, adopted this new practice following the training, a percentage comparable to the one (61.4%) identified in a 2010 exploratory study [42]. A study in Honduras [38] of nurses' auxiliaries trained in IUD insertion revealed that a large proportion of them did not insert IUDs on return to their workplaces either due to a general lack of confidence in their skills or because they did not conduct necessary activities to generate demand for this contraceptive approach in their communities. Similarly, in another project in Guatemala [39], one fourth of the nurses' auxiliaries who completed the training were not inserting IUDs 20 months after the end of their training. This translation of training into

practice is not just related to contraception. Three years after nurse prescribing was extended in the United Kingdom [40], an evaluation showed that 8% had not prescribed at all, and more than half (56.8%) prescribed less than once a week. According to the survey of nurses trained in hormonal contraception in Quebec, the 50% gap in practice may be attributed to several factors: retirement, changes in practice, lack of familiarity with this type of practice, perceived complexity of the new practice, lack of local support, limited resources, centralized decision-making in the health organization and lack of organizational leadership support in assimilating innovative practices. Furthermore, a number of nursing students who accessed the e-learning modules may have yet to enter the workforce or may simply be employed in other sectors.

In summary, adopting innovation poses unique challenges. While task-shifting in relation to hormonal contraception was a pragmatic response to a recognized problem, it has not been without obstacles. However, such novel pathways of care can have a significant impact on healthcare delivery. Since the implementation of CAHCs along with other strategies including a provincial drug insurance plan in Quebec (since 1998), availability of levonorgestrel IUD (since 2000) and direct consumer access to emergency contraception in pharmacies (since 2001), the abortion rate in Quebec (2004–2011) among women of 15–19 years of age has decreased by 24% (22.1–16.9 per 1000) and among women of 20–24 years of age by 15% (36.4–30.8 per 1000) [41]. Similarly, the birth rate (2004–2011) among teens (15–19 years of age) has decreased by 15% (10.3–8.8 per 1000) [42]. However, much work remains to be done to achieve full implementation of the provincial model of CAHCs in Quebec. Some proponents have called for the inclusion of this new practice within the scope of public health nursing competencies. Regardless of the future evolution of the CAHC model, it serves as an example of how interdisciplinary discussion and collaborative agreement can be used to develop and operationalize a concrete plan for task shifting. Such a model has the real potential to increase access to care and in the context of family planning and contraception, to contribute to the reduction of unplanned pregnancies.

References

- [1] World Health Organization, UNAIDS. Task shifting: global recommendations and guidelines — treat, train, retain. World Health Organization 2007. Available at: http://www.who.int/healthsystems/task_shifting/en/.
- [2] Vaillant HW, Cummins GTM, Richart RM, Barron BA. Insertion of Lippes Loop by nurse-midwives and doctors. *Br Med J* 1968;3(5619): 671-3.
- [3] Jejeebhoy SJ, Kalyanwala S, Zavier AJ, Kumar R, Mundle S, Tank J, et al. Can nurses perform manual vacuum aspiration (MVA) as safely and effectively as physicians? Evidence from India. *Contraception* 2011 Dec;84(6):615-21.
- [4] Farr G, Rivera R, Amatya R. Non-physician insertion of IUDs: Clinical outcomes among TCU380A insertions in three developing-country clinics. *Adv Contracept* 1998;14(1):45-57.
- [5] Aziz FA, Osman AA. Safety of intrauterine device insertion by trained nurse-midwives in the Sudan. *Adv Contracept* 1999;15(1):9-14.
- [6] Warriner IK, Meirik O, Hoffman M, Morroni C, Harries J, My Huong NT, et al. Rates of complication in first-trimester manual vacuum aspiration abortion done by doctors and mid-level providers in South Africa and Vietnam: a randomised controlled equivalence trial. *Lancet* 2006;368(9551):1965-72.
- [7] Lassner KJ, Chen CHC, Kropsch LAJ, Oberle MW, Lopes IMN, Morris L. Comparative study of safety and efficacy of IUD insertions by physicians and nursing personnel in Brazil. *Bull Pan Am Health Organ* 1995;29(3):206-15.
- [8] Eren N, Ramos R, Gray RH. Physicians vs. auxiliary nurse-midwives as providers of IUD services: a study in turkey and the Philippines. *Stud Fam Plann* 1983;14(2):43-7.
- [9] Warriner IK, Wang D, Huong NT, Thapa K, Tamang A, Shah I, et al. Can midlevel health-care providers administer early medical abortion as safely and effectively as doctors? A randomised controlled equivalence trial in Nepal. *Lancet* 2011;377(9772):1155-61.
- [10] Hoke TH, Wheeler SB, Lynd K, Green MS, Razafindravony BH, Rasamihajamanana E, et al. Community-based provision of injectable contraceptives in Madagascar: “task shifting” to expand access to injectable contraceptives. *Health Policy Plan* 2012;27(1): 52-9.
- [11] Stanback J, Mbonye AK, Bekiita M. Contraceptive injections by community health workers in Uganda: a nonrandomized community trial. *Bull World Health Organ* 2007;85(10):768-73.
- [12] Mullany LC, Lee TJ, Yone L, Lee CI, Teela KC, Paw P, et al. Impact of community-based maternal health workers on coverage of essential maternal health interventions among internally displaced communities in Eastern Burma: the MOM project. *PLoS Med* 2010;7(8): e1000317.
- [13] Armstrong KA, Stover MA. SMART START: an option for adolescents to delay the pelvic examination and blood work in family planning clinics. *J Adolesc Health* 1994;15(5):389-95.
- [14] Harper C, Balistreri E, Boggess J, Leon K, Darney P. Provision of hormonal contraceptives without a mandatory pelvic examination: the First Stop demonstration project. *Fam Plann Perspect* 2001;33(1):13-8.
- [15] Gardner JS, Miller L, Downing DF, Le S, Blough D, Shotorbani S. Pharmacist prescribing of hormonal contraceptives: results of the Direct Access study. *J Am Pharm Assoc* 2008;48(2):212-21.
- [16] Gouvernement du Québec. Projet de loi numéro 90, loi modifiant le Code des professions et d’autres dispositions législatives dans le domaine de la santé. Assemblée nationale, Gouvernement du Québec 2002 June Trente-sixième législature. Available from: <http://www2.publicationsduquebec.gouv.qc.ca/dynamicSearch/telecharge.php?type=5&file=2002C33F.PDF>.
- [17] Durand S, Allard M, Lussier S, Martin R-C, Richard M-J. Formulaire d’évaluation de l’infirmière pour initier la contraception hormonale. Ordre des infirmières et infirmiers du Québec 2007.
- [18] World Health Organization. Practical guidance for scaling up health service innovations. World Health Organization 2007. Available at: http://www.who.int/reproductivehealth/publications/strategic_approach/9789241598521/en/.
- [19] Ordre des infirmières et infirmiers du Québec. Guide de rédaction d’une ordonnance collective de contraception hormonale. Ordre des infirmières et infirmiers du Québec 2009:1-18.
- [20] World Health Organization. Medical eligibility criteria for contraceptive use, Fourth edition, 2009. World Health Organization, Switzerland.
- [21] Ordre des infirmières et infirmiers du Québec. Guide de rédaction d’une ordonnance collective de contraception hormonale et de stérilet. Ordre des infirmières et infirmiers du Québec 2012:1-22.
- [22] Groupe d’experts en planning familial de l’INSPQ. L’aider à choisir son contraceptif. *Perspectives infirmières* 2012;9(2):45-7.
- [23] Guilbert ER, Guilbert AC, Risi C, Gendron F, Bérubé J, Charbonneau L, et al. Portrait des ordonnances collectives de contraception hormonales adoptées au Québec. Québec, Canada: Institut nationale de santé publique du Québec; 2011.

- [24] Rogers Everett M. Diffusion of innovations. New York, NY 10020. United States of America: Free Press. A division of Simon & Shuster, Inc.; 2003.
- [25] Greenhalgh T, Robert G, MacFarlane F, Bate P, Kyriakidou O. Diffusion of innovations in service organizations: systematic review and recommendations. *Milbank Q* 2004;82(4):581-629.
- [26] World Health Organization. Practical guidance for scaling up health service innovations. [World Health Organization], 1–54. 2009. Geneva, Switzerland.
- [27] Callon M, Latour B. Les paradoxes de la modernité: comment concevoir les innovations? *Prospective et santé* 2003;36:13-25.
- [28] Grimshaw JM, Russell IT. Effect of clinical guidelines on medical practice: a systematic review of rigorous evaluations. *Lancet* 1993;342(8883):1317-22.
- [29] Baiardini I, Braido F, Bonini M, Compalati E, Canonica GW. Why do doctors and patients not follow guidelines? *Curr Opin Allergy Clin Immunol* 2009;9(3):228-33.
- [30] Grimshaw JM, Russell IT. Effect of clinical guidelines on medical practice: a systematic review of rigorous evaluations. *Lancet* 1993;342(8883):1317-22.
- [31] Flamm B, Kabcenell A, Berwick DM, Roessner J. Reducing cesarean section rates while maintaining maternal and infant outcomes. Boston, Massachusetts, United States of America: Institute of Healthcare Improvement; 1977.
- [32] Weiss KB, Mendoza G, Schall MW, Berwick DM, Roessner J. Improving asthma in children and adults. Boston (Mass): Institute for Healthcare Improvement; 1997.
- [33] Nugent WC, Kilo CM, Ross CS, Marrin CA, Berwick DM, Roessner J. Improving outcomes and reducing costs in adult cardiac surgery. Boston (Mass): Institute for Healthcare Improvement; 1999.
- [34] Berman S, Byrns PJ, Bondy J, Smith PJ, Lezotte D. Otitis media-related antibiotic prescribing patterns, outcomes, and expenditures in a pediatric Medicaid population. *Pediatrics* 1997; 100(4):585-92.
- [35] Shershneva MB, Larrison C, Robertson S, Speight M. Evaluation of a collaborative program on smoking cessation: translating outcomes framework into practice. *J Contin Educ Health Prof* 2011;31(S1): S28-36.
- [36] Goodwin V, Jones-Hughes T, Thompson-Coon J, Boddy K, Stein K. Implementing the evidence for preventing falls among community-dwelling older people: a systematic review. *J Safety Res* 2011;42(6): 443-51.
- [37] Fritsche MD, Ables AZ, Bendyk H. Opportunities missed: improving the rate of contraceptive counseling or provision when prescribing reproductive-aged women potentially teratogenic medications in a family medicine resident clinic. *Contraception* 2011; 84(4):372-6.
- [38] Villanueva Y, Mendoza I, Aguilar C, Rodriguez S, Vernon R. Expansion of the role of nurse auxiliaries in the delivery of reproductive health services in Honduras. *Population Council* 2001.
- [39] Montufar E, Morales C, Vernon R, Brambila C, Solorzano J. Improving access to long-term contraceptives in rural Guatemala through the Ministry of Health. *Population Council* 2005.
- [40] While AE, Biggs KSM. Benefits and challenges of nurse prescribing. *J Adv Nurs* 2004;45(6):559-67.
- [41] Institut de la statistique du Québec. Interruptions volontaires de grossesse, hystérectomies et stérilisations, par groupe d'âge, Québec 1976–2011. 2013.
- [42] Institut national de santé publique du Québec. Taux de grossesse selon l'âge, 2004–2011. Québec, Canada; 2013.



This content was developed by the Association of Reproductive Health Professionals. Since 1963, ARHP has served as the leading source for evidence-based educational resources for providers and their patients. Learn more at www.arhp.org.