

Provider perceptions of knowledge exchange and communication in a multisite family health team

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Abstract

Objective To describe providers' self-reported knowledge and use of family health team (FHT) services and to explore attitudes and perspectives about communication issues among health care professionals active within a large multisite FHT.

Design Electronic questionnaire.

Setting A multisite FHT in Toronto, Ont.

Participants Health care professionals active within the FHT (N=90).

Main outcome measures The survey captured demographic characteristics, including the respondents' roles and experience; knowledge about services available within the FHT; use of services; and perceived communication issues within the FHT.

Results Forty-six health care professionals participated (51% response rate). While respondents were highly aware of the clinical resources and services offered at their own site of practice (95% agreed or strongly agreed), only 54% were aware of services offered at other sites within the FHT. Internal referrals for certain specialty services were high (ie, methadone management, obstetric care, intrauterine device insertion, and psychiatry), but less than 50% of other referrals (ie, sports medicine, joint injections, or tropical medicine) were to physicians within the FHT, despite physicians within the FHT offering services in these areas of expertise. Only 60% of respondents believed that patients had equal access to all of the services within the FHT, and 42% agreed or strongly agreed that patients were unlikely to travel between sites to access services. Roughly one-quarter of respondents believed that physicians were unlikely to refer patients to another site within the FHT to receive health care services. Most respondents agreed that the geographic distribution of the sites negatively affected communication within the FHT (68% agreed or strongly agreed).

EDITOR'S KEY POINTS

- Approximately one-quarter of Canadians are enrolled in family health teams (FHTs). Key to this model is the provision of services by a range of providers. However, most FHTs are spread over multiple sites, with different sites often offering different services. This study aimed to explore providers' knowledge and use of the services available within their FHT, as well as their perceptions and attitudes about patient access and communication within the team.

- While respondents were confident about the services offered at their own site, they were less aware of what was offered at other sites. Many providers believed that patients were unlikely to travel between sites to receive care, despite all sites being separated by only about 2 km.

- Regular communication with FHT members within one's main site of practice was considerably higher (80% reported frequent communication) than with members at other sites (7%). Innovative strategies are likely needed to improve communication between sites in order to maximize use of the available services.

Conclusion Geographic dispersion of team members in a multisite FHT had a negative effect on provider knowledge of available services, perceived patient access to services, and communication within the team. As most FHTs are spread across multiple locations, finding ways to improve communication among team members will be key to maximizing the effectiveness of the patient care provided by these team-based models.

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L'opinion des soignants sur l'échange de connaissances et sur la communication au sein d'une équipe de santé familiale multi-sites

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Résumé

Objectif Décrire ce que pensent les soignants de leur degré de connaissance des services offerts par leur équipe de santé familiale (ESF) et de l'utilisation qu'ils en font, et vérifier leur opinion sur la communication entre les professionnels de la santé à l'intérieur d'une grande ESF multi-sites.

Type d'étude Un questionnaire électronique.

Contexte Une ESF multi-sites de Toronto, en Ontario.

Participants Des professionnels de la santé de l'ESF (N=90).

Principaux paramètres à l'étude Caractéristiques démographiques des répondants, incluant leur expérience et leur rôle; leur connaissance des services disponibles dans l'ESF; leur utilisation de ces services; et des problèmes de communication perçus au sein de l'ESF.

Résultats Ont participé à l'étude, 56 professionnels de la santé (taux de réponse de 51%). Alors que les répondants étaient très au courant des ressources cliniques et des services que leur site offrait (95% étaient d'accord ou fortement d'accord), seulement 54% connaissait les services offerts aux autres sites de leur ESF. Beaucoup de patients étaient dirigés dans certaines spécialités à l'intérieur de l'ESF (i.e. pour gestion de la méthadone, soins obstétricaux, insertion de stérilets et psychiatrie), mais moins de 50% des autres demandes de consultation (i.e. médecine du sport, injections intra-articulaires ou maladies tropicales) étaient faites à des médecins de l'ESF, malgré le fait que certains d'entre eux étaient en mesure d'y répondre. Seulement 60% des répondants croyaient que les patients avaient également accès à tous les services offerts par leur ESF, tandis que 42% étaient d'avis ou fortement d'avis que les patients étaient peu susceptibles de voyager d'un site à l'autre pour obtenir des services de santé. Environ le quart des répondants croyaient que les médecins ne dirigeraient probablement pas un patient à un autre site de l'ESF pour y être traité. La plupart des répondants étaient d'avis que la localisation géographique des sites avait une influence négative sur les communications à l'intérieur de l'ESF (68% étaient d'accord ou fortement d'accord).

Conclusion La dispersion géographique des membres d'une l'ESF exerce une influence négative sur ce que les soignants savent des services disponibles et sur ce qu'ils pensent de l'accessibilité de ces services pour les patients et des communications à l'intérieur de l'équipe. Comme la plupart des ESF couvrent plusieurs sites, il sera important de trouver des façons d'améliorer les communications entre les membres de l'équipe si on veut maximiser l'efficacité des soins dispensés par ce type de modèle qui repose sur une équipe.

POINTS DE REPÈRE DU RÉDACTEUR

- Environ 25% des Canadiens sont inscrits dans une équipe de santé familiale (ESF). La particularité de ces équipes est que les services sont dispensés par plusieurs types de professionnels. Cependant, la plupart des ESF s'étendent sur plusieurs sites, qui offrent souvent des services différents. Cette étude voulait vérifier ce que les soignants savent des services disponibles dans leur ESF et l'utilisation qu'ils en font, de même que ce qu'ils pensent de l'accessibilité aux services pour les patients et des communications à l'intérieur de l'équipe.
- Même si les répondants connaissaient bien les services offerts par leur site, ils étaient moins au fait de ce que les autres offraient. Plusieurs d'entre eux estimaient qu'il était peu probable que des patients aillent se faire soigner dans un autre site, même si la distance entre les sites n'était que d'environ 2 km.
- Les communications entre soignants d'un même site de travail étaient beaucoup meilleures que celles avec les membres des autres sites (80% des communications régulières intra-site contre 7% avec les autres sites). Des stratégies innovatrices pour améliorer les communications entre sites seront sans doute nécessaires si on veut maximiser l'utilisation des services disponibles.

Cet article a fait l'objet d'une révision par des pairs.
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Multiple providers often have to work together to maximize high-quality patient care, making the use of teams commonplace in today's primary health care system. A team approach in primary care has proven successful in the prevention and management of chronic conditions and in improving health status and quality of life.¹ In 2005, Ontario's Ministry of Health and Long-Term Care introduced the concept of the family health team (FHT), an interprofessional, team-based model of care with a goal of improving comprehensive, community-based care for all Ontarians. The past decade has seen a shift toward this team-based primary care model, with approximately 25% of Ontarians enrolled in the nearly 300 FHTs across the province.²

A cornerstone of the FHT model is the provision of services by a range of providers, including physicians, nurses, nurse practitioners, social workers, dietitians, pharmacists, and other providers, depending on the needs of the patient population. However, in most cases, a single FHT is spread out across multiple geographic sites.³ While patients are registered to a "home" clinic and must attend the site at which their most responsible physician works, they are able to use all FHT services regardless of the site they are offered at. While multiple sites might allow for greater access throughout a community, this separation of team members might also lead to disparate access to FHT resources.

The spread of sites within an FHT might also negatively affect communication among team members. Effective communication has long been accepted to be an inherent characteristic of an effective team.⁴ Increased communication leads to cohesion among patient care teams, which has been linked to high-quality care and patient satisfaction.⁵ On the other hand, breakdowns in communication have been shown to lead to medical errors⁶ and are key contributing factors in patient safety incidents.⁷⁻⁹ Face-to-face contact among team members, such as the "hallway consult," is an important collaborative component of medicine. In FHTs with multiple sites, this type of interaction is not possible between all team members, limiting the potential for interprofessional knowledge exchange, which might result in lower intrateam referrals to physicians with specialized skills (eg, endometrial biopsies, mole removals). Improved communication and knowledge exchange among team members has the potential to expand use of the resources available within an FHT, improve intra-FHT continuity of care, decrease external specialist referrals as intrateam referrals are maximized, and directly affect health care delivery.

Recently, the Ontario government has appeared to shift away from the FHT model, limiting physicians from entering these models except in underserved regions or to replace retiring physicians,¹⁰ and has signaled a review of team-based primary care models including the

use of interprofessional teams.¹¹ In theory, access to all services in an FHT is equitable for all patients and team members; however, anecdotal evidence suggests that cross-site referral is not maximized, limiting the effectiveness of this interprofessional model of care. The objective of this study was to describe the self-reported knowledge and use of FHT services and explore the attitudes and perspectives on communication issues among the numerous health care professionals active within a multisite FHT.

METHODS

We conducted a survey of all St Michael's Hospital Family Health Team members who provided direct patient care, including physicians, nurses, and allied health professionals (eg, nurse practitioners, pharmacists, social workers). Nonstaff providers (ie, residents, medical students, and other trainees) and clerical staff were not eligible to participate. Team members in this FHT are spread out across 4 geographically distinct sites in 5 different clinics with their own cultures and specialty services and programs. At the time of this study, the team consisted of 60 physicians, many with specialized clinical skills (eg, procedural skills, HIV, addictions) and numerous nonphysician health professionals, such as dentists, chiropractors, addictions counselors, and dietitians.

The survey consisted of questions in 3 broad categories: demographic characteristics, including the respondent's role within the FHT and length of experience; knowledge and use of services within the FHT; and perceived communication issues within the FHT. Participants were also asked about their awareness of physician specialties available within the FHT; these specialties were compiled from a self-reported inventory of clinical expertise and interests of the physicians. While most questions were closed-ended, an open-ended question allowed respondents to provide suggestions to improve communication within a multisite FHT. It was estimated that the survey took less than 10 minutes to complete.

Data collection occurred over a 2-month period (August through September 2013). Initial contact with the health care professionals was made via an e-mail to the department that included the link to the electronic survey (housed on SurveyMonkey). One month after this initial e-mail, an e-mail reminder was sent. The survey was anonymous and responses were not tracked as this has been shown to negatively affect response rate.¹²

Descriptive statistical analyses were conducted using SAS, version 9.4. This study received approval from the St Michael's Hospital Research Ethics Board.

RESULTS

Of the 90 health care professionals affiliated with the FHT at the time of the survey, 46 completed the survey (51% response rate). Most respondents were physicians (59%) and few respondents had been in their current roles for less than 1 year (11%) (**Table 1**). The 5 sites of the FHT were not equally represented; 1 site had a high number of participants ($n=17$, 37%), while another had relatively low participation ($n=5$, 11%).

Respondents self-reported a high level of awareness of the clinical resources and services offered at their site of practice (95% agreed or strongly agreed that they were aware of services offered). However, only 54% agreed or strongly agreed that they were aware of the resources and services offered at other sites within the FHT. Although knowledge of many of the available services within the FHT was high, such as diabetes education and prenatal classes, other services were not universally recognized as being offered, with 12%, 5%, 5%, and 9% of respondents not identifying the availability of dentistry, addictions counseling, chiropractic care, and HIV team services, respectively. Additionally, respondents incorrectly identified some services (occupational therapy [21%] and physiotherapy [35%]) as being available within

the FHT at that time. Self-reported knowledge of physician specialty skills within the team was variable, ranging from 62% for tropical medicine to 100% for obstetric care (**Figure 1**).

Thirty-two respondents (78%) and all responding physicians reported referring patients for specialty services either to physicians within the FHT or to outside specialist physicians. **Table 2** lists self-reported referral patterns for services for which at least 1 physician within the FHT had expertise. Of those who referred a patient for one of these specialty services, most referred internally for methadone management (100%), obstetric care (92%), intrauterine device insertions (87%), or psychiatry (73%). However, less than 50% of sports medicine, joint injection, or tropical medicine referrals were to physicians within the FHT. Conversely, health discipline

Table 1. Demographic characteristics of study participants: $N=46$, but not all respondents answered all questions.

CHARACTERISTICS	N (%)
Role within the FHT	
• Physician	27 (59)
• Registered nurse	8 (17)
• Other allied health professional (eg, nurse practitioner, dietitian, pharmacist, social worker, chiropractor)	10 (22)
Experience in current role, y	
• < 1	5 (11)
• 1-5	14 (30)
• 5-10	7 (15)
• > 10	20 (43)
Age, y	
• ≤ 30	< 5 (< 12)
• 31-40	16 (39)
• 41-50	8 (20)
• 51-60	9 (22)
• > 60	< 5 (< 12)
Sex	
• Male	14 (34)
• Female	27 (66)

FHT—family health team.

Figure 1. Proportion of respondents aware of areas in which physicians had special expertise within the FHT

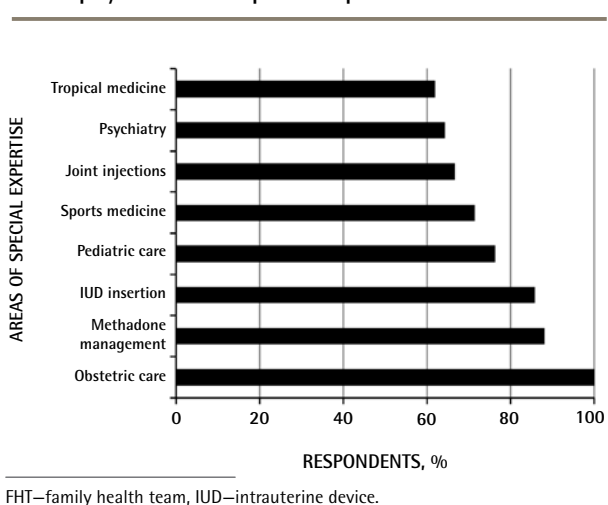


Table 2. Referral patterns to specialty physician services: All specialty services listed are available within the FHT.

SERVICE	PROVIDERS REPORTING REFERRAL, N (%)	PROVIDERS REPORTING REFERRAL TO PHYSICIAN WITHIN FHT, N (%)
IUD insertions	15 (39)	13 (87)
Joint injections	17 (43)	5 (29)
Obstetric care	25 (63)	23 (92)
Pediatric care	24 (60)	14 (58)
Methadone management	19 (48)	19 (100)
Sports medicine	24 (59)	10 (42)
Psychiatry	26 (67)	19 (73)
Tropical medicine	18 (45)	3 (17)

FHT—family health team, IUD—intrauterine device.

services were well used within the team, with more than 50% of respondents reporting regular referrals to social work, diabetes education, dietitian, pharmacist, psychologist, and chiropractic services (**Figure 2**). Reported referral rates were lower for prenatal care (38% of respondents report referring 1 to 2 times per month or more frequently), dentistry (35%), addictions counseling (23%), and the HIV team (23%).

Most respondents believed that patients had equal access to all of the services within the FHT regardless of the patient's home site (60%); however, respondents also reported that travel between sites might be an issue for patients, with 42% agreeing or strongly agreeing that patients at one site were unlikely to travel to another to access services. Twenty-three percent of respondents agreed that physicians were unlikely to refer patients to another site to access services.

Most respondents agreed that communication within the FHT was negatively affected because of the geographic distribution of the sites (68% agreed or strongly agreed). Regular communication with FHT members within one's main site of practice was considerably higher than with members at other sites, with 80% of respondents reporting frequent communication (1 to 2 times per week) with team members at their site of practice compared with 7% reporting frequent communication with those at other sites (**Figure 3**). Responses were similar when comparing physicians with other health providers within the FHT.

The most frequent modes of communication with FHT members at other sites were e-mail (88%), instant messaging within the electronic medical record (73%), telephone (48%), and during staff or formal meetings (45%). Suggestions to improve communications included a traveling "road show" to introduce services across the FHT, including service updates during regular staff meetings, or the use of an intranet or website forum.

Figure 2. Referral frequency

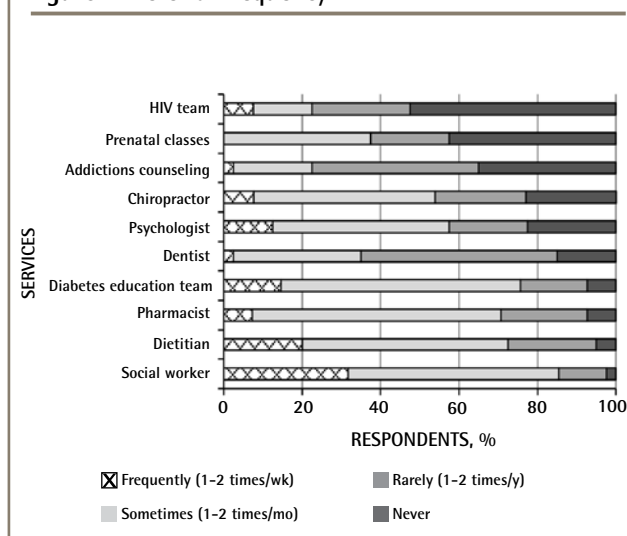
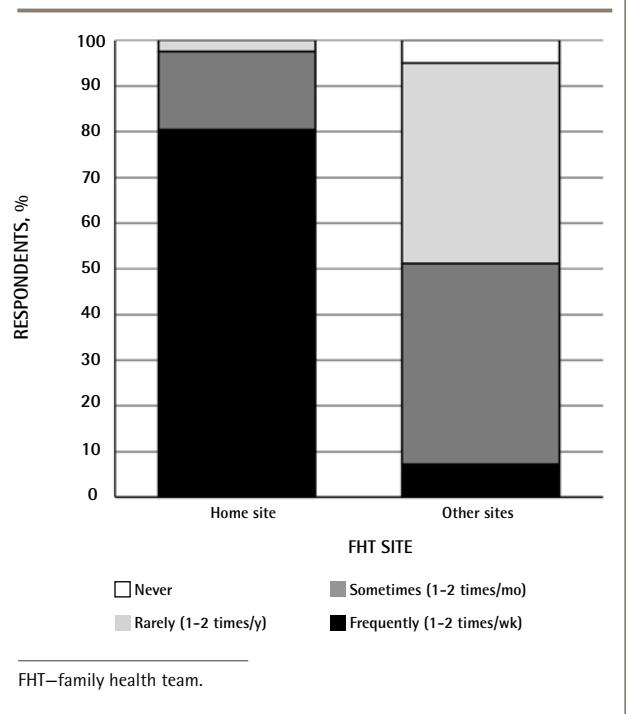


Figure 3. Reported frequency of communication with team members at FHT sites



Most respondents thought that the use of social media could improve communication among members of the FHT (61% agreed or strongly agreed), and 56% were willing to use a social media site to communicate with members outside of their site (20% reported being unsure and 24% were unwilling). The most common concerns with the use of social media as a means of communication were regarding personal (71%) or patient (63%) privacy.

DISCUSSION

Family health teams provide high-quality primary care for patients through an integral model of interprofessional services. Health providers working in interprofessional teams report positive experiences, with improvements reported in knowledge and attitudes among staff, training for students, and quality of care.¹³⁻¹⁶ Effective communication among health care team members is a crucial component of high-quality care and patient satisfaction,⁴⁻⁹ as well as provider satisfaction and sense of accomplishment.¹⁷ Our survey of health care providers in a multisite FHT found that the geographic dispersion of team members had a negative effect on providers' knowledge of available FHT services, perceived patient access to services, and communication within the team. While 95% of respondents believed they were aware of the services offered within their own sites, only 54% agreed that they were aware of the services offered at the

other sites in the FHT. Interestingly, some designated priority areas for the FHT, such as HIV and addictions, were not universally recognized by providers as being available. Perceived patient access to services also appeared to be an issue, with a large proportion of respondents (40%) believing that access was not equal. Most respondents believed that the geographic spread of the clinics had a negative effect on communication within the FHT.

The FHT model has advantages, providing patients access to other health care professionals that are not traditionally covered by the Ontario Health Insurance Plan (eg, dietitians, psychologists).¹⁸ Patients are part of a larger group of providers and might be able to receive certain specialty physician services within their FHT, rather than receiving referral to external facilities and possibly less timely care. However, many FHTs are spread out geographically because of the simple practicalities of various family doctors' offices joining together to form teams. Almost 60% of FHTs surveyed in 2012 had 2 or more sites within their team structure.³ In many FHTs both physicians and other health care providers work at various locations throughout the FHT in order to allow patients to receive services at their usual site of care.³ Qualitative studies of interprofessional collaboration in FHTs found that FHTs with multiple practice sites reported challenges to working effectively as teams.^{19,20} In addition, implementation of this collaborative care model has required that larger FHTs with numerous sites devote time and resources to maintaining consistency across sites.³ A qualitative study of communication methods used within primary health care teams found that informal communication methods among team members were opportunistic, in the vein of the traditional "hallway consult," and face-to-face communication was preferred for issues related to patient care.²¹ Clearly, as geographic separation is common among FHTs, the full benefits of the FHT model might not be achieved without some creative and innovative ways to ensure effective communication and overcome the separation of team members. Technology might play a role, as many FHT members in our study already reported frequent use of e-mail and messages in the electronic medical record. Interestingly, most respondents believed that social media could be a means to improve communication. Many physicians report using online communities to communicate with colleagues, including LinkedIn, Facebook, and physician-only communities such as Doximity and QuantiaMD.²² Future interventions should assess the utility of integrating these types of networking sites to improve communication among team members and explore ways to integrate this into current practices without making it onerous or time-consuming for providers.


The physician perception of unequal access to patient services is important, as access to community care is the backbone of the FHT model. Our study did

not delve into the reasons for this perception; however, physicians' awareness of available services at other sites likely plays a large role, as does the perception of providers that patients are unlikely to travel from site to site despite the fact that the 5 sites of this FHT are only separated by roughly 2 km. The cost and inconvenience of travel between sites combined with a lack of familiarity with other sites and staff members might indeed be important issues. However, as this study focused on provider-perceived issues with patient access, it is important that future work quantify the patient perception of access to various services and sites, along with potential barriers and solutions. This presents an opportunity for future research into potential interventions to increase intersite physician referrals and patient access. Both patient and provider views on how the geographic distribution of FHTs and their services affects access to the maximal benefits of the FHT should be further explored.

Limitations

Our study has some limitations. First, actual usage data for FHT services were not collected, and the self-reported data presented here might overreport usage of FHT resources. In addition, there is no adjustment for patient population (eg, the low reported referrals to the HIV team might be due to providers' specialties or patient populations, not referral choice) or patient preference. Patients might choose to be referred to a specific provider outside of the FHT for services. Finally, this survey was conducted in 1 large multisite FHT, and the results might not be generalizable. However, most FHTs in Ontario are composed of multiple sites,³ and other studies suggest that our communication issues are likely not unique.^{19,20} Effective communication among health care teams has been an ongoing issue, even among teams who work in the same area (eg, the operating room or the intensive care unit).²³⁻²⁵

Conclusion

This is the first quantitative study of knowledge translation and communication issues in a geographically disperse FHT. We found that the geographic dispersion of the team members had a negative effect on providers' knowledge of available FHT services, perceived patient access to services, and communication within the team. Improved knowledge of services within the FHT should increase service use and intrateam referrals, increasing the effectiveness of the team-based model and improving patient care. As FHTs are commonly spread across locations, finding innovative ways to improve communication among team members will be crucial to providing maximally effective and safe patient care. 

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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. Barrett J, Curran V, Glynn L, Godwin M. *CHSRF synthesis: interprofessional collaboration and quality primary healthcare*. Ottawa, ON: Canadian Health Services Research Foundation; 2007.
2. Association of Family Health Teams of Ontario [website]. *Find a health team near you*. Toronto, ON: Association of Family Health Teams of Ontario; 2015. Available from: www.afhto.ca/our-teams/find-a-health-team-near-you. Accessed 2015 Jan 16.
3. Conference Board of Canada. *Final report: an external evaluation of the family health team (FHT) initiative*. Ottawa, ON: Conference Board of Canada; 2014.
4. Mickan S, Rodger S. Characteristics of effective teams: a literature review. *Aust Health Rev* 2000;23(3):201-8.
5. Deeter-Schmelz DR, Kennedy KN. Patient care teams and customer satisfaction: the role of team cohesion. *J Serv Mark* 2003;17(7):666-84.
6. Leonard M, Graham S, Bonacum D. The human factor: the critical importance of effective teamwork and communication in providing safe care. *Qual Saf Health Care* 2004;13(Suppl 1):i85-90.
7. Gawande AA, Zinner MJ, Studdert DM, Brennan TA. Analysis of errors reported by surgeons at three teaching hospitals. *Surgery* 2003;133(6):614-21.
8. Sutcliffe KM, Lewton E, Rosenthal MM. Communication failures: an insidious contributor to medical mishaps. *Acad Med* 2004;79(2):186-94.
9. Risser DT, Rice MM, Salisbury ML, Simon R, Jay GD, Berns SD. The potential for improved teamwork to reduce medical errors in the emergency department. The MedTeams Research Consortium. *Ann Emerg Med* 1999;34(3):373-83.
10. Grant K. Ontario's curious shift away from family health teams. *The Globe and Mail* 2015 Feb 16.
11. Association of Family Health Teams of Ontario. *MOHLTC's priorities and plans for primary care*. Toronto, ON: Association of Family Health Teams of Ontario; 2015.
12. Akl EA, Gaddam S, Mustafa R, Wilson MC, Symons A, Grifasi A, et al. The effects of tracking responses and the day of mailing on physician survey response rate: three randomized trials. *PLoS ONE* 2011;6(2):e16942.
13. Pottie K, Farrell B, Haydt S, Dolovich L, Sellors C, Kennie N, et al. Integrating pharmacists into family practice teams. Physicians' perspectives on collaborative care. *Can Fam Physician* 2008;54:1714-7.e1-5. Available from: www.cfp.ca/content/54/12/1714.full.pdf+html. Accessed 2016 Mar 23.
14. Price D, Howard M, Hills L, Dolovich L, McCarthy L, Walsh AE, et al. Interprofessional education in academic family medicine teaching units. A functional program and culture. *Can Fam Physician* 2009;55:901-1.e1-5. Available from: www.cfp.ca/content/55/9/901.full.pdf+html. Accessed 2016 Mar 23.
15. Hogg W, Lemelin J, Dahrour S, Liddy C, Armstrong CD, Legault F, et al. Randomized controlled trial of Anticipatory and Preventive multidisciplinary Team Care. For complex patients in a community-based primary care setting. *Can Fam Physician* 2009;55:e76-85. Available from: www.cfp.ca/content/55/12/e76.full.pdf+html. Accessed 2016 Mar 23.
16. McKinnon A, Jorgenson D. Pharmacist and physician collaborative prescribing. For medication renewals within a primary health centre. *Can Fam Physician* 2009;55:e86-91. Available from: www.cfp.ca/content/55/12/e86.full.pdf+html. Accessed 2016 Mar 23.
17. Ragaz N, Berk A, Ford D, Morgan M. Strategies for family health team leadership: lessons learned by successful teams. *Healthc Q* 2010;13(3):39-43.
18. Association of Family Health Teams of Ontario [website]. *Interprofessional collaboration*. Toronto, ON: Association of Family Health Teams of Ontario; 2015. Available from: www.afhto.ca/resources/interprofessional-collaboration. Accessed 2015 Jan 22.
19. Goldman J, Meuser J, Rogers J, Lawrie L, Reeves S. Interprofessional collaboration in family health teams. An Ontario-based study. *Can Fam Physician* 2010;56:e368-74. Available from: www.cfp.ca/content/56/10/e368.full.pdf+html. Accessed 2016 Mar 23.
20. Goldman J, Meuser J, Lawrie L, Rogers J, Reeves S. Interprofessional primary care protocols: a strategy to promote an evidence-based approach to teamwork and the delivery of care. *J Interprof Care* 2010;24(6):653-65.
21. Brown JB, Lewis L, Ellis K, Stewart M, Freeman TR, Kasperski MJ. Mechanisms for communicating within primary health care teams. *Can Fam Physician* 2009;55:1216-22. Available from: www.cfp.ca/content/55/12/1216.full.pdf+html. Accessed 2016 Mar 23.
22. Modahl M, Tompsett L, Moorhead T. *Doctors, patients and social media*. Boston, MA: QuantiaMD; 2011.
23. Lingard L, Espin S, Whyte S, Regehr G, Baker GR, Reznick R, et al. Communication failures in the operating room: an observational classification of recurrent types and effects. *Qual Saf Health Care* 2004;13(5):330-4.
24. Pronovost P, Berenholtz S, Dorman T, Lipsett PA, Simmonds T, Haraden C. Improving communication in the ICU using daily goals. *J Crit Care* 2003;18(2):71-5.
25. Vazirani S, Hays RD, Shapiro MF, Cowan M. Effect of a multidisciplinary intervention on communication and collaboration among physicians and nurses. *Am J Crit Care* 2005;14(1):71-7.

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