

Engaging primary care physicians in care coordination for patients with complex medical conditions

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Abstract

Objective To explore the dynamics of primary care physicians' (PCPs') engagement with the Seamless Care Optimizing the Patient Experience (SCOPE) project.

Design Qualitative study using semistructured interviews.

Setting Solo and small group primary care practices in urban Toronto, Ont.

Participants A total of 22 of the 29 SCOPE PCPs (75.8%) were interviewed 14 to 19 months after the initiation of SCOPE.

Methods Qualitative semistructured interviews were conducted to examine influencing factors associated with PCPs' engagement in SCOPE. Transcripts were analyzed using a grounded theory-informed approach and key themes were identified.

Main findings The SCOPE project provided practical mechanisms through which PCPs could access information and connect with resources. Contextual and historical factors including strained relationships between hospital specialists and community PCPs and PCPs' feelings of responsibility, isolation, disconnection, and burnout influenced readiness to engage. Provision of clinically useful supports in a trusting, collaborative manner encouraged PCPs' engagement in newer, more collaborative ways of working.

Conclusion The SCOPE project provided an opportunity for PCPs to build meaningful relationships, reconnect to the broader health care system, and redefine their roles. For many PCPs, reestablishing connections reaffirmed their role in the system and enabled a more collaborative care model. Strategies for connecting community-based PCPs to the broader system need to consider contextual factors and the effects of new linkages and coordination on the identities and relationships of PCPs.

Editor's key points

- Effective, integrated care for medically complex patients requires coordination between primary care physicians (PCPs) and the health care system and a high degree of physician engagement. However, PCPs in solo and small group practices might not be well connected with the broader health care system. In 2012, the Seamless Care Optimizing the Patient Experience (SCOPE) project was initiated in Toronto, Ont, to increase linkages between community-based PCPs, hospitals, and community resources, and to engage physicians in an innovative, integrated care model for medically complex patients.
- This study suggests that it is possible to engage physicians who have been perceived to be resistant to change and collaboration in the past and to create more integrated care models with practitioners who have traditionally practised independently. The sense of isolation and perceived loss of status in primary care owing to historical and contextual factors, coupled with concerns about growing workload and responsibilities for an aging population, were important elements of the context in which the SCOPE project was developed.
- ▶ The SCOPE project was perceived as positively contributing to effective shared management of patients and seemed to encourage PCPs to both reconsider and redefine their professional identities as practitioners as they experienced the benefits of team-based care. Thus, SCOPE demonstrates that thoughtfully designed interventions can be effective with health care providers who are otherwise resistant to change.

Points de repère du rédacteur

- ▶ Des soins efficaces et intégrés pour des patients ayant des problèmes médicalement complexes exigent une bonne coordination entre les médecins de soins primaires (MSP) et le système de santé, de même qu'un fort degré d'implication de la part des médecins. Par ailleurs, les MSP en solo et en petits groupes de pratique peuvent ne pas avoir beaucoup de connexions au sein du système de santé dans son ensemble. En 2012, le projet SCOPE (Seamless Care Optimizing the Patient Experience) était amorcé à Toronto (Ontario) dans le but d'accroître les liens entre les MSP dans la communauté, les hôpitaux et les ressources communautaires, et de mobiliser les médecins pour un modèle de soins novateur et intégré pour les patients ayant des problèmes médicalement complexes.
- ▶ Cette étude fait valoir qu'il est possible de mobiliser des médecins qui étaient perçus auparavant comme étant résistants au changement et à la collaboration, et de créer des modèles de soins mieux intégrés, avec des professionnels qui avaient traditionnellement exercé la profession de manière indépendante. Le sentiment d'isolement et l'impression que les soins primaires avaient perdu de leur statut en raison de facteurs historiques et contextuels, combinés à des préoccupations entourant la charge de travail et les responsabilités grandissantes à l'égard d'une population vieillissante, étaient des facteurs importants du contexte dans lequel le projet SCOPE a été élaboré.
- ▶ Le projet SCOPE était perçu comme une contribution positive à une prise en charge partagée efficace des patients, et semblait encourager les MSP à reconsidérer et à redéfinir leurs identités professionnelles en tant que médecins, grâce à leur expérience des bienfaits des soins prodigués en équipe. Par conséquent, le projet SCOPE a démontré que les interventions conçues judicieusement peuvent être efficaces auprès des professionnels de la santé qui, autrement, résistent au changement.

Mobiliser les médecins de soins primaires pour la coordination des soins aux patients souffrant de problèmes médicaux complexes

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Résumé

Objectif Explorer la dynamique de la mobilisation de médecins de soins primaires (MSP) pour le projet SCOPE (Seamless Care Optimizing the Patient Experience).

Type d'étude Étude qualitative à l'aide d'entrevues semi-structurées.

Contexte Pratiques de soins primaires en solo et en petits groupes, dans la région urbaine de Toronto (Ontario).

Participants De 14 à 19 mois suivant l'instauration de SCOPE, 22 MSP sur 29 (75,8%) ont été interviewés.

Méthodes Des entrevues qualitatives semi-structurées ont été menées pour examiner les facteurs d'influence associés à la mobilisation des MSP pour le projet SCOPE. Les transcriptions ont été analysées selon une théorie à base empirique pour en dégager ensuite les thèmes principaux.

Principales observations Le projet SCOPE offrait des mécanismes pratiques dont pouvaient se servir les MSP pour accéder à des renseignements et établir des contacts avec les ressources. Des facteurs contextuels et historiques, notamment des relations tendues entre, d'une part, les spécialistes dans les hôpitaux et, d'autre part, les MSP dans la communauté, de même que les sentiments de responsabilité, d'isolement, de déconnexion et d'épuisement ressentis par les MSP ont influé sur leur volonté de se mobiliser. La fourniture de soutiens cliniques utiles, empreinte de confiance et de collaboration, a encouragé la participation des MSP à des manières plus novatrices et plus collaboratives de travailler.

Conclusion Le projet SCOPE a offert des possibilités aux MSP d'établir des relations significatives, de se reconnecter avec le système de santé dans son ensemble et de redéfinir leurs rôles. Pour de nombreux MSP, le rétablissement des connexions a réaffirmé leur rôle dans le système et a favorisé un modèle de soins plus collaboratif. Les stratégies pour connecter les MSP qui œuvrent dans la communauté au système plus large doivent tenir compte des facteurs contextuels ainsi que des effets des nouveaux liens et de la coordination sur les identités et les relations des MSP.

atients with complex chronic disease are typically high users of health care services and frequently transition between health care professionals and settings.1 These patients often experience poor continuity of care and have avoidable emergency department (ED) visits and hospitalizations. 1-5 Primary care physicians (PCPs) often serve as these patients' first point of contact with the health care system; effective and timely outpatient primary care can help patients manage complex chronic conditions, 6,7 reducing the risk of acute episodes that lead to ED visits, hospitalizations, and readmissions.8,9

High-quality, integrated care for medically complex patients requires effective working relationships among PCPs, other specialists, and other elements of the health care system. 10-13 These relationships are difficult to establish without common governance and information systems, 14,15 as communication across settings among the various clinicians in a patient's circle of care might be fragmented.3,16 While there is substantial literature regarding physician engagement in integrated care models, 17-19 little of this is relevant to the engagement of PCPs in solo or small group practice.²⁰ However, current fiscal pressures and practice realities warrant efforts to facilitate improved care integration with those independent PCPs whose patient populations might have disproportionate needs.²¹

The Seamless Care Optimizing the Patient Experience (SCOPE) project aimed to increase linkages between solo and small group practice (defined as practices of 3 or fewer PCPs for the purpose of this work) PCPs, local hospitals, and community resources to improve patient care and reduce acute care use for health care within the greater Toronto area in Ontario. The SCOPE project was designed to create a "virtual team" of health care professionals around PCPs known to have highrisk patient populations to enhance care coordination for those patients. The SCOPE intervention comprised 3 components, the first 2 of which were accessed via a single entry point. These components included a navigation hub (a team comprising a community care access centre system navigator and nursing and clerical staff available via telephone or fax) that offered assistance with obtaining non-PCP specialist referrals, tests, and community services; linkage to "on call" general internal medicine specialists who could provide telephone and e-mail consultations to PCPs and semiurgent in-person ambulatory patient assessments; and access to the hospital Patient Results Online system to enhance PCPs' electronic access to test results and hospital discharge notes.

The success of the SCOPE project depended on the recruitment and engagement of solo and small group practice community PCPs who would use the interventions to facilitate access to specialty services and care coordination for their complex patients. Local physician champions and input from participating PCPs were used to help encourage others to use SCOPE services.²⁰ Where other studies will look at patient outcomes and health

service use associated with SCOPE, in this manuscript we qualitatively explore the dynamics of PCPs' engagement in SCOPE, a voluntary care coordination initiative, designed to provide integrated care for patients with complex medical conditions.

- Methods -

A qualitative approach was used to examine PCPs' experiences with the SCOPE project. The study employed a case study design, data collection through key informant (KI) interviews, and a grounded theory approach to coding and analyzing the data.22,23

Setting and context

In 2015, there were 14894 PCPs in Ontario, a Canadian province with a population of 13.8 million.^{24,25} Since 2005, there has been an expansion of models featuring aspects of the Patient's Medical Home.26 Still, most Ontarians do not have access to multidisciplinary, team-based primary care and the potential benefits that such models can bring.21,27

Sampling

The SCOPE project enrolled 29 PCPs whose patients were among the highest users of a local ED, as identified through administrative data. An invitation letter was sent to all SCOPE PCPs to explain the study and encourage participation, which was voluntary. Informed written consent was obtained from all participating PCPs.

Data collection and analysis

Semistructured interviews were conducted. All interviews were audiorecorded (with participants' consent), transcribed verbatim, and coded for key themes using a grounded theory-informed analytic approach^{28,29} and NVivo 10 software. Data regarding PCPs' engagement with the project and perceived facilitators and challenges to participation were coded employing the constant comparative method^{30,31} and themes developed. One member of the team (E.L.) conducted all interviews; other team members reviewed the coding and the themes on an iterative basis (G.R.B., G.A.H., N.M.I., P.P.).

The project was approved by institutional research ethics boards at Women's College Hospital, University Health Network, and the University of Toronto.

— Findings —

Twenty-two of the 29 SCOPE PCPs (75.9%) were interviewed 14 to 19 months after the initiation of SCOPE. Interviews ranged from 30 to 60 minutes in length. Most interviewees were male (81.8%), had been in practice for longer than 15 years (86.4%), and lacked a university affiliation (68.2%). Three-quarters (77.2%) of these physicians were in solo practices. Interviewees were

similar to the overall group of SCOPE PCPs, except that they had more experience working in EDs (Table 1).

In the interviews a number of the PCPs reflected at length on how the historical and political context of their professional careers affected their professional roles, which shed light on their responsiveness to SCOPE. Two key themes about the context of the study emerged from PCPs' accounts: a history of strained relations between PCPs and their colleagues in other specialty and hospital care; and a sense of personal responsibility for their patients and professional pride in practising independ-ently. These

Table 1. The SCOPE PCP and study KI office profile characteristics

characteristics		
OFFICE PROFILE CHARACTERISTICS	SCOPE PCPs, N (%), N = 29	KIs, N (%), N = 22
Male sex	24 (82.8)	18 (81.8)
Age, y		
• 30-39	2 (6.9)	1 (4.5)
• 40-49	7 (24.1)	7 (31.8)
• 50-59	8 (27.6)	6 (27.3)
•≥60	12 (41.4)	8 (36.4)
Time in family practice, y		
•≤5	1 (3.4)	1 (4.5)
• 6-10	1 (3.4)	0 (0.0)
• 11-15	2 (6.9)	2 (9.1)
•>15	25 (86.2)	19 (86.4)
Practice size		
•≤1000	1 (3.4)	0 (0.0)
• 1001-2000	10 (34.5)	8 (36.4)
• 2001-3000	6 (20.7)	4 (18.2)
• > 3000	12 (41.4)	10 (45.4)
Proportion of patients ≥65 y		
• < 30	6 (20.7)	4 (19.0)
• 30-50	19 (65.5)	14 (66.7)
• > 50	4 (13.8)	3 (14.3)
Family practice profile		
 Solo practice, university affiliated 	7 (24.1)	6 (27.3)
 Solo practice, not university affiliated 	14 (48.3)	11 (50.0)
 Group practice, university affiliated 	2 (6.9)	1 (4.5)
 Group practice, not university affiliated 	6 (20.7)	4 (18.2)
Experience in the ED*	17 (58.6)	15 (68.2)

ED-emergency department, KI-key informant, PCP-primary care physician, SCOPE—Seamless Care Optimizing the Patient Experience. *Range of experience 1-18 v.

issues, influenced by ongoing broader changes to the nature of outpatient primary care practice, resulted in frequent feelings of isolation, disconnection, and burnout, which help explain the reticence among these PCPs to engage in health system reform initiatives.

Strained relationships between specialty services and PCPs

Before SCOPE, PCPs perceived their communication with hospital specialists to be poor. They described considerable challenges in accessing information about their patients' ED visits and hospital admissions, frustration about not receiving consultation notes in a timely manner or at all, and not being informed about requisitions and results of medical procedures ordered by non-PCP specialists. In describing their interactions with hospitalbased providers, a number of PCPs reported feeling dismissed. Many PCPs thought this limited access to information hampered their patients' views of their usefulness in stewarding their care and undermined their ability to provide optimal care.

Whenever my patients would be in the hospital and I wanted to know some information ... I would call the hospital and it would just be a brick wall! Even when I would send consent no one would give me any information and, of course, I felt frustrated and isolated. It's my patient And I wouldn't get any response, it was like a brick wall. I felt isolated. There was no cooperation. We were treated like second class ... you are like no one when you are a family physician and you ask for some feedback. (KI005)

These changes in the relationships between PCPs and their other-specialist and hospital-based colleagues had occurred over time and were partly the result of broader changes in professional practice patterns. Changes in the organization of health services in Ontario also contributed to the situation of these PCPs. Several PCPs commented on how the hospital restructuring reforms of the 1990s in Ontario led to loss of their hospital privileges and resulted in feelings of dissatisfaction and disconnection from local hospitals. Interviewees noted that these changes had not been implemented smoothly and many thought that assurances made to the medical community had not been honoured.

I have been practising in primary care for 25 years. Initially when I graduated it was my sense that community medicine family practitioners had more of a role to play in hospitals. More of an active role, whether it be in supporting your patients during hospital admission, whether they were better integrated in terms of inpatient beds, better integration with academic family medicine units. What I have found over the last few years is that the community family

docs have almost been marginalized out of the hospital environment I think that it just has to do with the institutions becoming bigger and focusing more on priority programs, which are often not primary care-based programs These programs usually leave primary caregivers out of the equation. (KI018)

Professional pride in practising independently

The strained relations between PCPs and other specialists resulted in an undesired loss by PCPs of professional responsibility for their patients. Referrals to non-PCP specialists often meant that PCPs would "be in the dark" regarding what happened to patients following referral. Limited connections with hospitals and non-PCP specialists eroded these PCPs' professional identities. Their experiences of "losing patients" following referral and dissatisfaction with information about the care provided to their patients by other providers further exacerbated their reluctance to share responsibility. As a result, many of these PCPs became reluctant to trust other providers and risk the relationships that they have built with patients over time.

I had the courage to tell him that and he is sending [the information] now. But patients would come in here and tell me, "Oh the doctor said that they are his medications." They are not his medications. We are both participating in and taking care of [the patient]" They are not his medications [We are] both providing care to the same individual. [The patient] is not mine or his. (KI012)

Although SCOPE aimed to restore the connection between PCPs and hospital-based physicians, for some PCPs their previous experiences and the value they placed on practising independently led them to resist participation in SCOPE. For them, accessing services from other doctors or care settings reflected on their professional role identity and responsibility for these complex patients. Some even worried that use of SCOPE services would lead to negative repercussions, including, "being monitored about where your patients are going, whether too many of them are going [to the ED], whether you are servicing them" and "being criticized" about their practice operations. (KI019) Other PCPs recognized the need to change their practice style, but spoke about the learning curve associated with asking for support and sharing patient care with other health professionals, and were uncertain if the supports they received would fit their needs.

Overwhelming burden of patient care as a barrier to change

Owing to their limited connection to other providers and care resources, and the episodic nature of hospital care, these PCPs reported feeling increased, and at times overwhelming, levels of responsibility for their patients. Some PCPs believed that they had to bear most or all of the responsibility for their patients' care.

Doctors just practise really independently here. You know 30, 40 years ago family physicians would have hospital privileges and take care of their patients in the hospital and we would know all the stuff that happens. That doesn't happen [anymore]—I am in my office here, inundated with 70 patients a day and I see my patients here and that is it. I stopped—I don't have hospital privileges anymore ... I don't have that liaison with other physicians—it's just me. I am here alone. (KI007)

The commitment to patient care, coupled with the pressures of managing large practices, contributed to considerable feelings of overwork and burnout for these providers. One PCP described his office as "being inundated by 50 million people" and "flooded with patients." (KI007) Another noted that there is an "inherent inertia" toward change in primary care given the continuing demands of practice resulting in "an exhausted kind of environment where there is no time." (KI009) Several PCPs described their concerns about patients and how the management of their care can affect their personal time. One PCP noted that "if I sent [a patient] home [without SCOPE], I would be worrying about him on the weekend I would feel very helpless." (KI014)

Perceived benefits of engaging in SCOPE

Despite their previous negative experiences with hospitalbased physicians, several PCPs reported positive changes in their individual well-being and increased productivity as physicians after the introduction of SCOPE. The PCPs participating in SCOPE appreciated the opportunity to connect with medical colleagues to discuss difficult cases, receive reassurance regarding their proposed approaches, and obtain advice from SCOPE team members who had become trusted clinical colleagues despite the virtual nature of the network.

The nurse at the hub of the SCOPE project, they are not only your friend but they are an expert, right? And you can rely on them to say "I am going to take a little bit of time and get back to you on your question." So, that is very, very different than you sitting in your office, very much pressed for time and trying to just deal with problems quick. I think that the more people that you have around you-either literally around you or sort of virtually around you because they are easily accessible, the more likely you can make better decisions and stay on top of the rapid changing services that are available. (KI019)

The importance of providing support and reassurance to this group of PCPs is evident in their descriptions of feeling "safer," "more comfortable," and "more confident to deal with complex cases."

I feel much safer. Because not everything is on only my shoulders-the responsibility. Now I get the help from the specialists, from SCOPE, from everybody. As I said from the beginning, I don't feel so isolated. You have some difficult patients, and then you finish [for the day] and you don't really know whether you should [have] sent them to emergency, you want to manage them on your own, but then it is so much responsibility that you come home and all night you are thinking "should I have sent him to emergency?" And with this, with the help of SCOPE, I [have] had more reassurance. (KI005)

One of the PCPs who was among the highest users of SCOPE services saw it chiefly as a support mechanism to allow her to continue to provide high-quality care to, and to maintain professional responsibility for, her complex patients, not as a critique of her ability as a physician. The SCOPE Primary Care Lead, a respected peer, helped PCPs to recognize that they did not need to bear the entire burden of responsibility for complex medical patients' care or work in such an independent manner. One PCP noted, "I think [SCOPE] has made me realize that we [were] trying to do too much before and there are ways to share the load to make things easier for the patients and the doctor." (KI010)

Discussion -

Our findings offer novel insights for those planning health system reforms involving primary care. We found continuing resentment among PCPs of their marginalization32-34 from hospital colleagues and resources that resulted from restructuring and associated health care reforms several years earlier. As raised by, and discussed with, some interviewees, this marginalization appeared to shape the willingness of some PCPs to engage in new, more collaborative practices. This highlights how historical contexts can profoundly influence present-day health system transformation initiatives. At the same time, we also found that attachment to traditional conceptions of professional roles and identity help to explain why some health professionals might struggle to engage in new ways of practising. A key element of SCOPE involved using local champions to help reframe PCPs' traditional views about independent (rather than collaborative) practice and to revise the nature of the services provided to PCPs based on input from them (ie, participatory design). 35,36 The "fit" of the SCOPE strategies with independent PCPs' needs, and its success in altering PCPs' perceptions, reinforces the importance of tailoring the implementation of interventions to the context.

The SCOPE project opened the door for PCPs to participate in a shared care model for patients with complex

medical conditions in a way that did not threaten their professional identity and that valued the ongoing relationship between patients and their PCPs. The general internal medicine specialists were available to provide timely consultations and did not assume responsibility for patients without the explicit approval of the referring PCP. The SCOPE navigation hub nurse offered a bridge between the PCP and other specialist offices, following up on results and outstanding questions on behalf of the PCPs. Thus, SCOPE provided a tangible way for PCPs who had been practising independently to re-engage as a part of the broader health care system. Co-location can facilitate effective team-based care, 37,38 but SCOPE demonstrates that lower-cost, virtual team models can also be successful and might be a more acceptable practice model for solo or small group practice PCPs. Research linking team-based, collaborative care approaches with improved quality of life and decreased provider burnout levels has emerged. 27,39,40 Such findings, in conjunction with the results of this study, suggest that developing collaborative care models might be as important from a provider-experience perspective as from patient-care and system-integration perspectives.

Trust and mutual respect in interprofessional relationships are key to forming collaborative models between PCPs and other specialists. 41,42 The SCOPE project's commitment to delivering support in a consistent, timely, and collaborative manner was likely fundamental to buyin, especially among PCPs who might be slow to adopt new models of collaborative practice and have developed established ways of practising. The SCOPE model provided an opportunity for PCPs to interact with medical colleagues in a more supportive and respectful manner, build trusting and dependable relationships with other health care providers, and renegotiate how they perceive their role within the broader health care system. Establishing collaborative relationships that reaffirm the value of the PCP in the system might help overcome barriers to team-based, patient-centred care of chronic conditions in systems where PCPs are the "gatekeepers." Such relational work takes time; thus, collaborative care models like SCOPE will likely have limited shortterm effects on "hard" outcomes (eg, ED admissions). Encouragingly, this study shows productive relationships can be facilitated through appropriately designed interventions, and that solo and small group PCPs, who might not have engaged previously in health system reforms, can meaningfully contribute to new models of care.

The professional identity of PCPs as independent practitioners acted as a barrier to taking advantage of resources for their patients. Our findings regarding the PCPs' pride in their capability to practise independently might echo the hesitancy of medical residents to request support lest it be interpreted as reflecting their inadequate knowledge or preparation. 43,44 There is a tension between the traditional view of the

full-service family physicians, who have the expertise and capacity to manage patients' health concerns in almost all clinical settings, and those who take pride in their ability to both care for common problems and effectively coordinate access to additional care when required. 45,46 The growing emphasis on interprofessional education and practice47-50 might help medical trainees appreciate the benefits of participating in shared care models and define themselves as part of a team or system of providers. Such reframing of professional identity might also be realized in more experienced physicians through interprofessional continuing education⁵¹ and, as this study shows, through involvement in collaborative models like SCOPE.

Limitations

This study assessed engagement approximately 14 to 19 months into the project, and the longer-term sustainability of PCPs' engagement in SCOPE was not addressed.

The sample consisted of PCPs in solo and small group practices from a metropolitan city in Ontario. The practice challenges, needs, and contextual factors of this urban-based group might be different from those of other PCPs, including those in rural settings. Several rural physicians have expressed interest in this intervention, but the effects in rural settings have not been evaluated.

The experiences that Ontario PCPs in this setting had with hospital restructuring in Ontario in the mid-1990s influenced their views and subsequent engagement in the SCOPE project. Other PCPs who did not experience these changes might have different reactions and engagement.

Medical education is increasingly emphasizing the importance of interprofessionalism and incorporating interprofessional training experiences within curricula, which might limit the transferability of these findings to newly trained physicians.

Conclusion

Our study suggests that it is possible to engage physicians who have been perceived to be resistant to change and collaboration in the past and to create more integrated care models with practitioners who have traditionally practised independently. The sense of isolation and perceived loss of status in primary care owing to historical and contextual factors, coupled with concerns about growing workload and responsibilities for an aging population, were important elements of the context in which the SCOPE project was developed. Despite this challenging context, SCOPE was perceived as positively contributing to effective shared management of patients and seemed to encourage PCPs to both reconsider and redefine their professional identities as practitioners as they experienced the benefits of team-based care. Thus, SCOPE demonstrates that thoughtfully designed interventions can be effective with health care providers who are otherwise resistant to change.

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Contributors

All authors participated in the conception and design of the study, acquisition of data, or analysis and interpretation of data, and contributed to the development and revisions of the manuscript. All authors read and approved the manuscript submitted.

Competing interests

Dr Ivers was supported by New Investigator Awards from the Canadian Institutes of Health Research and the Department of Family and Community Medicine at the University of Toronto. Dr Hawker receives support as the Sir John and Lady Eaton Professor and Chair of Medicine in the Department of Medicine at the University of Toronto. The other authors declare no competing interests.

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References

- 1. Epstein AM, Jha AK, Orav EJ. The relationship between hospital admission rates and rehospitalizations. N Engl J Med 2011;365:2287-95.
- 2. Wodchis WP, Austin PC, Henry DA. A 3-year study of high-cost users of health care. CMAJ 2016;188(3):182-8.
- 3. Kripalani S, LeFevre F, Phillips CO, Williams MV, Basaviah P, Baker DW. Deficits in communication and information transfer between hospital-based and primary care physicians: implications for patient safety and continuity of care, IAMA 2007:297(8):831-41.
- Moore C, Wisnivesky J, Williams S, McGinn T. Medical errors related to discontinuity of care from an inpatient to an outpatient setting. J Gen Intern Med 2003;18(8):646-51.
- 5. Van Walraven C, Seth R, Austin PC, Laupacis A. Effect of discharge summary availability during post-discharge visits on hospital readmission. J Gen Intern Med 2002;17(3):186-92.
- 6. Sanchez M, Vellanky S, Herring J, Liang J, Jia H. Variations in Canadian rates of hospitalization for ambulatory care sensitive conditions. Healthc Q 2008;11(4):20-2.
- 7. Starfield B. Shi L. Macinko I. Contribution of primary care to health systems and health. Milbank Q 2005;83(3):457-502.
- 8. Huntley A, Lasserson D, Wye L, Morris R, Checkland K, England H, et al. Which features of primary care affect unscheduled secondary care use? A systematic review. BMJ Open 2014;4(5):e004746.
- 9. Busby J, Purdy S, Hollingworth W. How do population, general practice and hospital factors influence ambulatory care sensitive admissions: a cross sectional study. BMC Fam Pract 2017;18(1):67.
- 10. Kringos DS, Boerma WG, Hutchinson A, van der Zee J, Groenewegen PP. The breadth of primary care: a systematic literature review of its core dimensions. BMC Health Serv Res 2010:10:65.
- 11. Suter E, Oelke ND, Adair CE, Armitage GD. Ten key principles for successful health systems integration. Healthc Q 2009;13:16-23.
- 12. Rodriguez HP, Rogers WH, Marshall RE, Safran DG. Multidisciplinary primary care teams: effects on the quality of clinician-patient interactions and organizational features of care. Med Care 2007;45(1):19-27.
- 13. Bodenheimer T, Ghorob A, Willard-Grace R, Grumbach K. The 10 building blocks of high-performing primary care. Ann Fam Med 2014;12(2):166-71.
- 14. Wagner EH. Chronic disease management: what will it take to improve care for chronic illness? Eff Clin Pract 1998:1(1):2-4.
- 15. Bodenheimer T, Wagner EH, Grumbach K. Improving primary care for patients with chronic illness: the chronic care model, part 2. JAMA 2002;288(15):1909-14.
- 16. Osborn R, Moulds D, Squires D, Doty MM, Anderson C. International survey of older adults finds shortcomings in access, coordination, and patient-centered care. Health Aff (Millwood) 2014;33(12):2247-55. Epub 2014 Nov 19.
- 17. Denis JL, Baker GR, Black C, Langley A, Lawless B, Leblanc D, et al. Exploring the dynamics of physician engagement and leadership for health system improvement: prospects for Canadian healthcare systems. Ottawa, ON: Canadian Foundation for Health Care Improvement; 2013.
- 18. Dickinson H, Ham C. Engaging doctors in leadership: review of the literature. Leeds, UK: National Health Service: 2008.
- 19. Burns LR, Muller RW. Hospital-physician collaboration: landscape of economic integration and impact on clinical integration. Milbank Q 2008;86(3):375-34.

- 20. Pariser P. Pus L. Stanaitis I. Abrams H. Ivers N. Lockhart E. et al. Improving system integration: the art and science of engaging small community practices in health system innovation. Int J Family Med 2016;2016:5926303. Epub 2016 Jan 24.
- 21. Kiran T, Kopp A, Glazier RH. Those left behind from voluntary medical home reforms in Ontario, Canada. Ann Fam Med 2016;14(6):517-25.
- 22. Starks H, Trinidad SB. Choose your method: a comparison of phenomenology, discourse analysis, and grounded theory. Qual Health Res 2007;17(10):1372-80.
- 23. Mills I. Bonner A. Francis K. The development of constructivist grounded theory. Int I Qual Meth 2006:5:25-35, Epub 2006 Mar 1,
- 24. Canadian Institute for Health Information. Supply, distribution and migration of physicians in Canada, 2015: methodological notes. Ottawa, ON: Canadian Institute for Health Information; 2016.
- 25. Cansim. Table 051-0001. Estimates of population, by age group and sex for July 1, Canada, provinces and territories, annual (persons unless otherwise noted). Ottawa, ON: Statistics Canada; 2016.
- 26. Hutchison B, Levesque JF, Strumpf E, Coyle N. Primary health care in Canada: systems in motion. Milbank O 2011:89(2):256-88.
- 27. Friedberg MW, Rosenthal MB, Werner RM, Volpp KG, Schneider EC. Effects of a medical home and shared savings intervention on quality and utilization of care. JAMA Intern Med 2015;175(8):1362-8.
- 28. Charmaz K. Constructing grounded theory: a practical guide through qualitative analysis. London, UK: Sage Publications; 2011.
- 29. Green J, Thorogood N. Qualitative methods for health research. London, UK: Sage Publications: 2009.
- 30. Glaser BG, Strauss A. The discovery of grounded theory: strategies for qualitative research. New York, NY: Aldine De Gruyter; 1967.
- 31. Strauss A, Corbin J. Basics of qualitative research: grounded theory procedures and techniques. Newbury Park, CA: Sage Publications; 1990.
- 32. Manca D, Varnhagen S, Brett-MacLean P, Allan GM, Szafran O. RESPECT from specialists. Concerns of family physicians. Can Fam Physician 2008;54:1434-5.e1-5. Available from: www.cfp.ca/content/cfp/54/10/1434.full.pdf. Accessed 2019 Mar 7.
- 33. Manca DP, Breault L, Wishart P. A tale of two cultures. Specialists and generalists sharing the load. Can Fam Physician 2011;57:576-84.
- 34. Beaulieu MD, Samson L, Rocher G, Rioux M, Boucher L, Del Grande C. Investigating the barriers to teaching family physicians' and specialists' collaboration in the training environment: a qualitative study. BMC Med Educ 2009;9:31. Epub 2009 Jun 7.
- 35. Macaulay AC. Promoting participatory research by family physicians. Ann Fam Med 2007:5(6):557-60.
- 36. Schmittdiel JA, Grumbach K, Selby JV. System-based participatory research in health care: an approach for sustainable translational research and quality improvement. Ann Fam Med 2010;8(3):256-9.
- 37. 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/cfp/56/10/e368.full.pdf. Accessed 2019 Mar 7.
- 38. Gotlib Conn L, Reeves S, Dainty K, Kenaszchuk C, Zwarenstein M. Interprofessional communication with hospitalist and consultant physicians in general internal medicine: a qualitative study. BMC Health Serv Res 2012;12:437.

- 39. Reid RJ, Coleman K, Johnson EA, Fishman PA, Hsu C, Soman MP, et al. The Group Health medical home at year two: cost savings, higher patient satisfaction, and less burnout for providers. Health Aff (Millwood) 2010;29(5):835-43.
- 40. Rosenthal MB, Friedberg MW, Singer SJ, Eastman D, Li Z, Schneider EC. Effect of a multipayer patient-centered medical home on health care utilization and quality: the Rhode Island chronic care sustainability initiative pilot program. JAMA Intern Med 2013;173(20):1907-13.
- 41. Wood ML. Communication between cancer specialists and family doctors. Can Fam Physician 1993;39:49-57.
- 42. Berendsen AJ, Benneker WH, Meyboom-de Jong B, Klazinga NS, Schuling J. Motives and preferences of general practitioners for new collaboration models with medical specialists: a qualitative study, BMC Health Serv Res 2007;7:4.
- 43. Kennedy TJ, Regehr G, Baker GR, Lingard L. Preserving professional credibility: grounded theory study of medical trainees' requests for clinical support. BMJ 2009:338:b128.
- 44. Kennedy TJ, Regehr G, Baker GR, Lingard LA. 'It's a cultural expectation...' The pressure on medical trainees to work independently in clinical practice. Med Educ 2009:43(7):645-53.
- 45. Jones L, Green J. Shifting discourses of professionalism: a case study of general practitioners in the United Kingdom. Sociol Health Illn 2006;28(7):927-50.
- 46. Lepnurm R, Dobson R, Backman A, Keegan D. Factors associated with career satisfaction among general practitioners in Canada. Can J Rural Med 2007;12(4):217-30.
- 47. Price D, Howard M, Hilts L, Dolvich L, McCarthy L, Walsh A, et al. Interprofessional education in academic family medicine teaching units. A functional program and culture, Can Fam Physician 2009:55:901.e1-5, Available from: www.cfp.ca/content/ cfp/55/9/901.full.pdf. Accessed 2019 Mar 7.
- 48. Whitehead C. The doctor dilemma in interprofessional education and care: how and why will physicians collaborate? Med Educ 2007;41(10):1010-6.
- 49. Herbert CP. Changing the culture: interprofessional education for collaborative patient-centred practice in Canada. J Interprof Care 2005;19(Suppl 1):1-4.
- 50. Institute of Medicine. Interprofessional education for collaboration. Learning how to improve health from interprofessional models across the continuum of education to practice. Workshop summary. Washington, DC: National Academies Press; 2013.
- 51. Owen JA, Schmitt MH. Integrating interprofessional education into continuing education: a planning process for continuing interprofessional education programs. J Contin Educ Health Prof 2013;33(2):109-17.

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