Practice sharing among residents in a family medicine teaching unit

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Family medicine teaching units (FMTUs) function as home training sites for family medicine residents, allowing them to manage their own ambulatory practices under attending physician supervision. Residents typically work 3 half-days per week at FMTUs (reduced to a single half-day per week during higher acuity clinical rotations), as well as arrange consultations and manage laboratory results.

Although this care model is widely praised for its ability to emulate "real-world practice," it suffers when patients cannot access their assigned resident provider, such as on days when the resident is off service, at a remote elective training session, or on vacation. At these times, patients have to be booked with an alternative resident provider. This is suboptimal, as compromised access and continuity of care are known to be associated with increased emergency department visits and hospitalizations, decreased uptake of preventive services, and decreased patient satisfaction.[1-3] Similarly, residents' educational experience might be compromised with reduced continuity. In this pilot study, practice sharing, in which paired residents jointly provide care to a merged patient practice, addresses these clinical and educational challenges.

Evidence from the literature

The literature on practice sharing among residents is extremely sparse, as the little published on the topic has mostly been limited to attending physicians. However, these studies and perspectives have shown promise with respect to increasing access and continuity of care for patients.[4-7] They also suggest improvements in physicians' abilities to optimize work-life balance, to pursue academic interests and commitments, and to gradually transition in or out of various roles at progressive career stages.[4]

Pilot study

Objective. Our goal was to explore whether resident practice sharing might help address the aforementioned challenges with patient access and continuity of care in an FMTU. Given the paramount importance of continuity to the practice and culture of family medicine, we also sought to examine the effects practice sharing might have on residents' educational experiences, particularly with respect to the centrality of patient-physician relationships. We were also interested in identifying any potential logistical challenges before considering a broader, unit-wide roll-out of the program.

Design and setting. We implemented a trial of resident practice sharing at our FMTU (in the University Health Network at Toronto Western Hospital in Ontario) in the 2016-2017 academic year. Four residents were involved in the pilot (ie, 2 practice-sharing dyads), with the remaining 24 residents in the unit continuing to provide care in the traditional model and therefore functioning as our controls. The number of residents involved in the pilot is conceded to be relatively small, but the numbers of patients and visits over the study period were sufficiently large to allow a fairly reasonable analysis.

Methods. Each practice was co-managed by a first- and second-year resident, both of whom were equally responsible for the care of the patients in their merged practice, including attending to them in clinic, reviewing test results and consultation reports, and coordinating ongoing care. Patients were informed that if they were unable to access one of their resident physicians, they should preferentially book with the other (ie, rather than book with the first available resident).

Data collection and findings. During the 8-month data-collection period, clinic physicians saw 2728 patients assigned to resident practices over 8048 visits. Female patients comprised 57% of this patient sample. On an average clinic day, 38 patients assigned to resident practices attended clinic, with each resident being scheduled for an average of 7.3 patient appointments, but seeing 6.8 patients (ie, 0.54 patients per day did not keep their appointments). There were no significant differences between intervention and control groups at baseline with respect to patient sex, appointment length, number of patients seen in a half-day, or number of resident days in clinic. Patients were, on average, 1.8 years older at baseline in the intervention group ($P<.05$). **Table 1** provides further information on patient and resident variables and is available at **CFPlus**.*

Using our electronic health record, we collected data on metrics relevant to health care optimization (including continuity of care, defined as the proportion of visits at which a patient sees his or her assigned physician, and "no-show" appointments, defined as the proportion of booked appointments not kept by patients).[8-10]

Using a multivariate difference-in-differences logit regression model, we then retrospectively compared these variables between practice-sharing residents and the 24 control residents in the FMTU. To our surprise, we discovered that the continuity of care measure increased by

*The **resident orientation guide, information for patients,** and the **work flow** and **scheduling algorithms,** as well as **Table 1,** are available at **www.cfp.ca**. Go to the full text of the article online and click on the **CFPlus** tab.

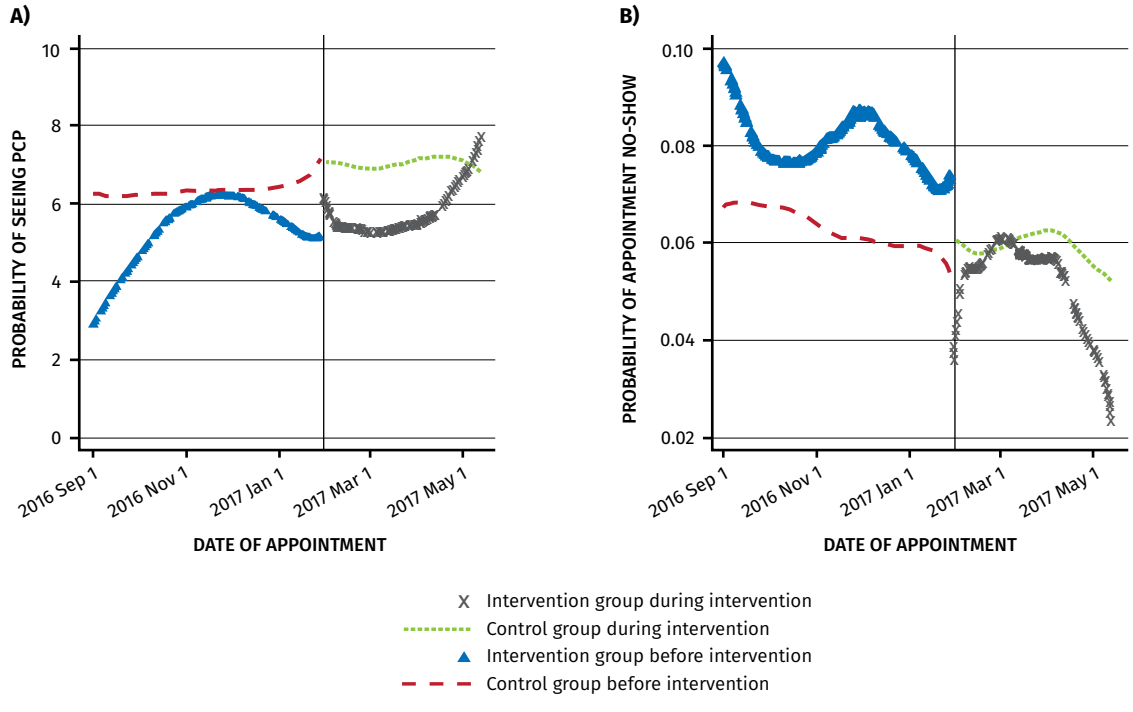
11% (P=.01), while the no-show rate decreased by 24% (P=.01), both in the practice-sharing group relative to non–practice-sharing controls. **Figure 1** presents the probability curves for patients seeing their primary care providers and appointment no-shows.

The 4 residents who participated in practice sharing also participated in a focus group meeting at the termination of the pilot to explore whether practice sharing might (at least subjectively) compromise educational standards. We designed our interview questions to specifically probe around issues relevant to the College of Family Physicians of Canada's standards for accreditation.[11] Practice-sharing residents perceived increased continuity of care with their patients, as well as the potential for improved cross-coverage, collaboration, and mentorship with their partners. They noted a small, acceptable increase in workload with the model; however, this occurred mostly at the onset as the division of labour was negotiated within each dyad. In this respect, residents agreed they would have benefited from well delineated guidelines to clarify which dyad member would be responsible for which tasks. They also believed that establishing a prespecified, regular time to meet briefly, review common patients, troubleshoot various issues, and establish consensus on more complex or challenging situations would be advantageous. Finally, residents noted the need for a robust patient education campaign on the nature of practice sharing in order to manage expectations and maximize success.

Implementation of practice sharing. To increase the likelihood of successful uptake, instituting a practice-sharing model requires a thoughtful, deliberate roll-out on several fronts: division of workload among residents, engagement of faculty preceptors, training of administrative staff, and orienting patients to this model of care. **Box 1** provides an important summary of actions for successful implementation of practice sharing.

Tools and resources. We have developed various tools that might help the implementation of practice sharing. The resident orientation guide introduces the practice-sharing model to residents and provides tips for troubleshooting and optimizing dyad functioning and success. The patient information handout explains, in plain language, the nature of the practice-sharing model and its benefits to patients; front desk staff can distribute this handout to both existing and new patients. The administrative work flow algorithm supports administrative staff in directing information or tasks appropriately in the context of practice sharing. And, finally, the reception scheduling algorithm can help reception staff to consistently book patients with 1 of their 2 assigned physicians. These tools are available at **CFPlus**.*

Figure 1. Probability curves: *A) Probability of patients seeing their PCPs; B) Probability of appointment no-show.*



PCP—primary care provider.

Box 1. Summary of actions for successful implementation of practice sharing

If planning to implement the practice-sharing model for residents at an FMTU, consider the following:

- When merging practices, pair first- and second-year residents to form care-providing dyads. This will optimize mentorship opportunities and potentially offset the varying clinical and academic duties unique to each year of training
- Establish clear expectations regarding how to divide patient care workload among the 2 members of a practice-sharing dyad. Consider identifying for each patient a "primary" versus a "secondary" provider who would have slightly differing but unambiguous roles and responsibilities. (See the resident orientation guide at **CFPlus*** for examples.) Disseminate these expectations early (eg, at resident orientation sessions) and frequently
- Encourage residents to coordinate their schedules to ensure consistent coverage of their joint practice. For example, they should ideally request vacation or remote electives at complementary times, rather than simultaneously
- Ensure that faculty preceptors are fully aware of the care delivery model, and encourage them to monitor and assess their residents with respect to their ability to work harmoniously with their dyad partner (as this model provides a unique opportunity to probe the collaborator and communicator CanMEDS–Family Medicine roles)
- Actively orient patients to the care model. Use various communication tools (eg, e-mail messages, business cards listing both resident providers). A patient information sheet is available at **CFPlus***; this can be used as waiting room reading material
- Provide adequate training to reception and other administrative staff to increase engagement and optimize work flow processes (eg, scheduling appointments, forwarding documents such as laboratory results, prescription renewal requests)

FMTU—family medicine teaching unit.

Conclusion

Our pilot study demonstrated that practice sharing among residents increased continuity of care while reducing no-show rates, both common and substantial challenges in many FMTUs. Resident-physician relationships were not compromised and, in fact, residents' educational experiences were positively affected in a number of ways, including improvement in cross-coverage, collaboration, and mentorship. Future steps should include larger, prospectively designed evaluations, as well as ascertainment of patient satisfaction with this innovative care delivery model.

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Competing interests
None declared

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Teaching tips

- Practice sharing is a model of care in which paired residents jointly provide care to a merged patient practice. This pilot study found that practice sharing among residents increased continuity of care while reducing patient no-show rates. Consider implementing practice sharing to address the challenges of fluctuating resident availabilities in family medicine teaching units.
- For practice sharing to be successful, many actions are required, including providing residents (and their faculty preceptors) with clear guidelines and expectations on the division of tasks and patient care workload, actively orienting patients to the care model, ideally with communication tools, and training administrative staff on work flow processes.
- Tools for practice sharing such as a resident orientation guide, information for patients, and work flow and scheduling algorithms are available at **CFPlus**.* Use these tools to assist in the implementation of practice sharing.

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