

them results in residents who are able and willing to practice in the medical home, the hospital, the home, and all venues family medicine is provided.

8. An Internet-based national core curriculum in family medicine has been established to facilitate the teaching, learning, and practice of the core across the continuum from student to practice.

9. The discipline of family medicine accepts and celebrates the fact that some family physicians differentiate beyond the core such that a new generation of family medicine specialists provide advanced services in maternity care, hospital medicine, sports medicine, research, geriatrics, palliative care, and _____ (fill in your area of focus).

10. We celebrate the ethnic, racial, gender, and professional diversity of our family medicine colleagues because we reflect a common humanity providing care for a lifetime.

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VIRTUAL TEAMS: SECRETS OF A SUCCESSFUL LONG-DISTANCE RESEARCH RELATIONSHIP. A CANADIAN PERSPECTIVE

Studies show the effectiveness of interdisciplinary research teams.¹⁻³ Research teams are changing in terms of composition, location, and process. Grantmakers are recognizing the power of the distributed mind. When granting research awards, funders are encouraging partnerships to combine the best expertise of a variety of specialists. Collaboration allows researchers to be better placed to produce relevant results for their target audience. Decision makers gain improved understanding of the relevance and value of research.⁴

One option for creating an interdisciplinary collaborative is to form a virtual team. Virtual teams are groups

* CIHI's Pan-Canadian PHC Indicator Development Project brought together a broad range of PHC experts from multiple levels of the health system and regions across Canada in order to determine important measures to evaluate PHC in Canada and identify enhancements to Pan-Canadian PHC data collection infrastructure. CIHI, *Pan-Canadian PHC Indicators, Report 1, Volumes 1 and 2. Enhancing the PHC data Collection Infrastructure in Canada, Report 2.* Ottawa: CIHI; 2006.

of people who work interdependently with a shared purpose across space, time, and organizational boundaries using technology to communicate and collaborate.⁵

While communication technologies such as MS Communicator and Webex plus continued globalization have increased researchers' ability and motivation to work together, it is important to recognize the unique processes required to build and manage virtual teams. Virtual teamwork creates coordination challenges imposed by members' variety of schedules and different time zones.

This paper presents promising practices of successful long-distance research relationships and conducting virtual meetings that we learned through the Canadian Institute for Health Information's (CIHI) Primary Health Care (PHC) Project.* The framework followed involved 4 components: assessing, planning, implementing, and evaluating.

Assessing

Determining the proportion of time that members work face-to-face compared to virtually was a priority. Facilitating from a distance required strategic use of face-to-face communication. This choice is important when the virtual team needs to build trust, brainstorm ideas, and mediate conflicts.⁶ A face-to-face "kick-off" meeting is ideal. "In-person" meetings can be arranged, cost-effectively, at conferences.

Planning

Preparing before the meeting involved circulating meeting information, ensuring attendance, and providing technology training. Planning was critical because there were no conversations around the coffee machine where team members could clarify roles.

We conducted an introductory telephone interview with each member. Questions helped identify and document members' expectations (especially scheduling preferences), build commitment, provide an overview (including members' names), and refine logistics such as obtaining their cellular number. Roles and responsibilities were defined and assigned. The Lead was the content expert who encouraged commentary and solutions whereas the Facilitator acted as moderator and timekeeper. A minute-taker was also recruited.

Establishing a shared purpose and accompanying goals and objectives is vital. Survey findings of geographically-dispersed teams suggest setting quality goals and building commitment to goals significantly affects perceptions of project outcomes.⁷ Terms of Reference (comprising of background/overview, team purpose, membership selection criteria, duration of participation, responsibilities and meeting dates, venue and start/finish time) were developed for CIHI's Advisory Committees.

Creating a meeting schedule covering the length of the study helped members with time management, ensuring everyone "agonizes" equally from early morning meetings.

Visual cues are essential for effective virtual teams. Materials were sent electronically 4 days before meeting date (preferably before a weekend). A slide presentation included an agenda, objectives and tasks, and team performance evaluation. A cover e-mail message highlighting the teleconference number, the meeting time explicitly stated for each time zone, and expected homework return date served as a good reminder.

Implementing

Rules of engagement are necessary because information technology can change the context of human relationships.⁸ Our team chose their top 3 rules and implemented them over several meetings, then revised or added additional rules to test. These included:

- If anyone was confused, they were to say so
- Everyone participated. Roundtable commentary, involving a cross-country check-up, encouraged full participation in discussions about key questions
- One person spoke at a time. Setting a "talking" time limit per member enhanced team engagement

Good communication practices were essential. Members had to be cognizant of the lack of visual cues. Identifying themselves when speaking and avoiding side conversations were good practices. Proactive listening should be modeled by the Lead, for example by clarifying and helping one another understand ideas and suggestions generated by the team.

Effective virtual team functioning means attending to group content and process with a minor focus on technology. Research demonstrates successful technology-supported collaboration depends not only on technology, but also on the organization's ability to adopt an entirely new way of working.⁹ Communicating effectively in virtual teams means applying communication technology that best fits situational needs.⁶ Another study found successful virtual teams made use of online team rooms, where everyone could see the state of work-in-progress, talk about work in ongoing threaded discussions, and be reminded of decisions. Differences were resolved in teleconferences, which

Leads also used to foster group solidarity.¹⁰ Our virtual team, however, found the videoconference 7-second delay distracting and preferred teleconferences.

Evaluating

Evaluating team performance for "What worked well and what could be better?" permits interim process improvement. Submitting a "lessons learned" document after research is completed, so others may learn, is also useful.

Effective virtual team functioning is an important opportunity in the present research environment. Turning distance and diversity into competitive advantage will lead to success.

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