

Mechanisms for communicating within primary health care teams

Judith Belle Brown PhD Laura Lewis PhD Kathy Ellis MSc Moira Stewart PhD
Thomas R. Freeman MD MCISc FCFP M. Janet Kasperski RN MHSCE

ABSTRACT

OBJECTIVE To explore the types of communication used within primary health care teams (PHCTs), with a particular focus on the mechanisms teams use to promote optimal clinical and administrative information sharing.

DESIGN A descriptive qualitative study.

SETTING Primary health care teams in Ontario between August 2004 and October 2005.

PARTICIPANTS Purposive sampling was used to recruit 121 members from 16 PHCTs reflecting a range of health care professionals, including family physicians, nurse practitioners, nurses, pharmacists, dietitians, social workers, office managers, health promoters, and receptionists.

METHODS Individual in-depth interviews were conducted. An iterative analysis process was used to examine the verbatim transcripts created from the interviews. Techniques of immersion and crystallization were used in the analysis.

MAIN FINDINGS Analysis of the data revealed that communication occurs through formal and informal means. Formal communication included regular team meetings with agendas and meeting minutes, memorandums, computer-assisted communication, and communication logs. Informal communication methods were open and opportunistic, reflecting the traditional hallway consultation. For patient care issues, face-to-face communication was preferred. Team member attributes facilitating communication included approachability, availability, and proximity. Finally, funding issues could be an impediment to optimal communication.

CONCLUSION Primary health care is experiencing demands for enhanced and efficient communication that optimizes team functioning and patient care. This study describes formal and informal mechanisms of communication currently used by PHCTs. Attributes that facilitate team communication, such as approachability, availability, and proximity of team members, were highlighted. New funding arrangements might alleviate concerns about remuneration for attendance at meetings.

EDITOR'S KEY POINTS

- As primary care teams grow in size and scope of practice, communication among team members will become more complex. Instituting effective communication mechanisms will be essential to ensuring coordinated and timely patient care and administrative efficiency. This study aimed to examine the types and mechanisms of communication currently used by health teams.
- Teams used both formal and informal communication mechanisms, bridged by medical informatics, including electronic health records and computerized messaging systems. Uptake of such systems is relatively low in Canada, and their potential is likely untapped. Participants' views on computerized communication were mixed and might reflect the tension between early adopters and those who lack skills or interest in computerized communication. Funding issues were identified as another barrier to implementation.
- Participants described informal communication as the most common method of sharing information and the preferred method for patient care issues.

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Mécanismes de communication au sein des équipes de soins primaires

Judith Belle Brown PhD Laura Lewis PhD Kathy Ellis MSc Moira Stewart PhD
Thomas R. Freeman MD MCISc FCFP M. Janet Kasperski RN MHSc CHE

RÉSUMÉ

OBJECTIF Déterminer les types de communication en usage dans les équipes de soins primaires (ÉSP), en insistant sur les mécanismes employés pour maximiser le partage des informations cliniques et administratives

TYPE D'ÉTUDE Étude descriptive qualitative.

CONTEXTE Équipes de soins primaires en Ontario, entre août 2004 et octobre 2005.

PARTICIPANTS On s'est servi d'un échantillonnage raisonné pour recruter 121 membres de 16 ÉSP représentant un éventail de professionnels de la santé, y compris des médecins de famille, des infirmières cliniciennes, des infirmières régulières, des pharmaciens, des diététistes, des travailleurs sociaux, des gestionnaires, des promoteurs de la santé et des réceptionnistes.

MÉTHODES On a utilisé des entrevues en profondeur individuelles. Les comptes rendus textuels des entrevues ont été ensuite soumis à un processus d'analyse itérative qui utilisait des techniques d'immersion et de cristallisation.

PRINCIPALES OBSERVATIONS L'analyse des données a révélé que pour communiquer, on utilise des moyens formels et informels. La communication formelle comprend les réunions périodiques des équipes avec ordres du jour et compte rendus, les notes de service, la communication informatisée et les logiciels de communication. Les modes de communication informelle étaient les discussions ouvertes opportunistes, telles les consultations de corridor. On préférait la communication de personne à personne pour les questions relatives aux soins des patients. Les qualités favorisant la communication chez les membres des équipes incluaient l'accessibilité, la disponibilité et la proximité. Finalement, les problèmes de financement pouvaient constituer un obstacle à la communication.

CONCLUSION Dans les soins primaires, on éprouve le besoin d'une communication meilleure et efficace, capable d'optimiser le fonctionnement de l'équipe ainsi que les soins. Cette étude décrit les moyens formels et informels présentement utilisés par les ÉSP. On y souligne les qualités qui facilitent la communication dans l'équipe, telles que l'accessibilité, la disponibilité et la proximité des membres de l'équipe. De nouveaux modes de financement pourraient atténuer les inquiétudes concernant la rémunération pour assistance aux réunions.

POINTS DE REPÈRE DU RÉDACTEUR

- À mesure que les équipes de soins primaires grandissent et élargissent leur champ de pratique, la communication entre leurs membres devient plus complexe. Il faudra instaurer des moyens de communication efficaces si on veut maintenir l'opportunité et la coordination des soins, et l'efficacité administrative. Cette étude voulait déterminer les types et les mécanismes de communication présentement utilisés dans les équipes de soins.
- Les équipes utilisaient des moyens de communication à la fois formels et informels, reliés par des systèmes informatiques incluant les dossiers médicaux numérisés et les systèmes de messagerie électroniques. Ces systèmes sont relativement peu utilisés au Canada et leur potentiel, sans doute inexploité. Les participants avaient des opinions diverses sur la communication électronique, reflétant vraisemblablement la tension entre les membres déjà familiers avec ces méthodes et ceux ayant peu d'habileté ou d'intérêt pour ce type de communication. La question du financement était aussi citée comme faisant obstacle à la mise en place de ces moyens.
- Les participants voyaient la communication informelle comme la méthode de partage de l'information la plus fréquente et le moyen privilégié dans le cas des soins aux patients.

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Communication is a hallmark of effective teamwork.¹⁻⁵ Exemplary communication optimizes team interaction and effectiveness.⁶ Furthermore, effective communication between and among team members has been linked to improved patient outcomes and patient safety.^{7,8}

Teams use both informal and formal mechanisms for communication. Informal means of communication include, for example, "hallway consultations" and placing "sticky notes" on charts or computer screens.⁹ Formal mechanisms of communication include regularly scheduled team meetings, for both clinical and administrative matters, and documentation through minutes and memorandums.¹⁰⁻¹² Drinka and Clark¹⁰ underline the importance of delineating specific tasks to be accomplished before, during, and after team meetings, such as creating an agenda before the meeting with the appropriate individual assigned to each agenda item, having all personal electronic devices turned off during meetings, and agreeing on an action plan during the meeting for follow-up afterward. Of 8 factors related to team effectiveness, Higgins and Routhieaux¹² emphasize regular team meetings and clearly delineated team plans.

Bridging both formal and informal means of communication within primary health care teams (PHCTs) is the growing use of medical informatics, including the electronic health record and computerized messaging systems.^{13,14} The latter promotes the timely and efficient transfer of information for both clinical and administrative issues among team members.¹⁵ Improving the flow of information, as well as access to information, can serve to improve the quality of communication within the team and thereby improve patient care.¹⁶

As PHCTs grow in size and scope of practice, communication will become more complex.¹⁵ Therefore, instituting effective mechanisms of communication on the team will be essential to ensuring coordinated and timely patient care, as well as administrative efficiency.¹⁵ Given that communication is considered the hallmark of effective teamwork, what do today's primary health care professionals view as the key ingredients of and important barriers to successful communication within their teams? This paper examines the mechanisms for communication PHCTs are currently using and what members of the PHCTs perceive to be the successes and challenges of communication in their teams.

METHODS

This was a descriptive qualitative study using in-depth interviews to collect data from a range of health care professionals working in primary health care teams.¹⁷ The data were collected in the province of Ontario between August 2004 and October 2005.

Sample selection and recruitment

The goal of the sample selection and recruitment was to secure a maximum-variation sample with regard to location (urban vs rural); practice type (family health groups [FHGs] or family health networks [FHNs], community health centres [CHCs], and family practice teaching units [FPTUs]); team composition; and size.¹⁸

Several sampling techniques were used to recruit participants. Potential teams were identified through a number of sources, including a list of FHGs and FHNs provided by the Ministry of Health and Long-Term Care; a list of all of the CHCs in the province, supplied by the Association of Ontario Health Centres; and a list of FPTUs identified through academic departments of family medicine in Ontario. Potential participants were first mailed a letter of information outlining the study, which also indicated that each participant would receive a \$75 gift certificate for his or her participation. Seven to 10 days after the letter was mailed, the practice sites were contacted by telephone to determine if they were interested in participating.

Data collection

A semistructured in-depth interview was conducted with each participant by 1 of 2 interviewers (L.L. and J.B.B.). The interview guide included questions such as "How does your team communicate?" and "What formal and informal communication strategies do you use?" The interviews were conducted at the various practice sites and lasted 1 hour on average. A brief description of each practice was developed to document the context, and field notes were generated following each interview.

Data analysis

All interviews were audiotaped, transcribed verbatim, and subsequently checked by the original interviewer for accuracy. In the first phase of the analysis each transcript was independently reviewed and coded by a minimum of 2 researchers to determine key concepts and themes emerging from the data. The researchers then met to compare and contrast their independent coding, culminating in a consensus that informed the development of the coding template. The coded transcript was then inputted into NVivo.¹⁹ The second iteration of the analysis involved generation of reports for each of the main themes, with exemplar quotes illustrating the themes. The research team then met for further synthesis and interpretation of the themes. Immersion and crystallization were used throughout the analysis process.²⁰ Theme saturation was achieved after approximately 75 interviews; however, the researchers were committed to ensuring all the different practice types and team members had an equal voice in the research process and thus completed the data collection and analysis for all 121 interviews. Credibility and trustworthiness of the data were enhanced through 3

principal means: interviews were transcribed verbatim, field notes were taken at the interview site to facilitate accuracy of data interpretation, and a minimum of 2 researchers read and analyzed the data independently before coming together for team analysis.

Ethics approval

Ethics approval for this study was received from The University of Western Ontario's Review Board for Health Sciences Research Involving Human Subjects (review no. 10949E).

Final sample and demographics

The final sample consisted of 16 PHCTs with 4 FPTUs, 5 CHCs, and 7 FHGs or FHNs. The size of the teams ranged from 5 to 35 members. There were 10 urban sites and 6 rural sites. Among the 121 participants interviewed, 30% were nurses; 25% were family physicians; 11% were receptionists or medical secretaries; 7% were office managers; 7% were program directors; 5% were social workers; 4% were pharmacists; 4% did health promotion; 3% were dietitians; 3% were clinical aids; and 1 participant was a chiroprapist. The average age of participants was 46 years (range 25 to 65 years), and participants had been members of their team for an average of 8.8 years (range 2 months to 35 years).

FINDINGS

Four themes emerged from the data regarding the means and mechanisms used to communicate on PHCTs. These included formal communication (eg, team meetings, agendas, meeting minutes and memorandums, computer-assisted communication, and communication logs); informal communication (eg, hallway consultations or chats and sticky notes); attributes that facilitated both formal and informal communication (eg, approachability, availability, and proximity); and funding issues related to communication (Table 1).

Formal communication

Team meetings were viewed by participants as fundamental to their formal communication process and as an opportunity to engage all members in a consensus-building process.

At team meetings we discuss problems or things that we think need to be addressed. Everyone puts in their two cents regarding the problem. We operate on consensus and solve issues and make sure that everybody is okay with the decision that is made.

Having both regular and scheduled team meetings was also seen as important. Regularly scheduled team meetings provided a venue to discuss issues relevant to the

Table 1. Mechanisms for communicating within primary health care teams

TYPE OF COMMUNICATION	STRATEGY	ATTRIBUTE	FUNDING ISSUE
Formal communication	Regular team meetings	Approachability, availability	Yes
	Agendas		No
	Meeting minutes		No
	Memorandums		No
Informal communication	Computer, e-mail	Availability, proximity	Yes
	Communication logs	Availability, proximity	No
	Hallway consultation (face to face)	Proximity, approachability, availability	No
	"Sticky notes"	Proximity, approachability, availability	No

team and to problem solve about clinical and administrative issues.

If there's something that needs to be instituted or brought in practice-wide, we'll do it through those meetings and then we'll send minutes of the meeting so that everyone is aware of what was discussed because not everyone can attend.

Participants also agreed that agendas and minutes of team meetings assisted in organizing and documenting the team's activities and decisions. One participant commented, "I make an agenda ahead of our discussions of what everyone's concerns may be and we voice our opinions and try to work things out for ourselves." Minutes taken at meetings served as documentation and guided the direction of future action. "At the monthly meetings there are minutes taken and [the minutes are] referred to over the course of the following weeks."

Memorandums served as another means of communication among team members to relay urgent messages ("If there was something urgent I would send a memo") or to provide updates ("The doctors send a lot of memos. They send them to every team member about something in public health or current issues that are happening").

Although computer-assisted communication is relatively new to these teams, it was endorsed by most participants. They saw it as a more efficient means of communication that was less vulnerable to human error.

The computers have become a really good communication device because [there is] a messaging system on the [electronic medical record]. So instead

of having a whole bunch of little slips of paper with messages on [them], which sometimes get lost, they're listed in the computers You don't have to worry about where you put the piece of paper.

Computer-assisted communication was also viewed as a means of sharing information more quickly: "With our computer system we have a wonderful message system where we can relay the messages and ask questions and then they reply that way."

However, participants spoke frankly about the strengths and weaknesses of e-mail communication. E-mail communication allowed for transparent documentation, efficiency, and objectivity: "It has to do with documentation and making sure that it is in writing, and in some instances it is more time efficient and it keeps the emotional aspects out of it." On the other hand several constraints with regard to e-mail use were voiced by front-line staff who felt that they, in comparison to the doctors and nurses on the team, did not have sufficient time available to use e-mail effectively.

We're front line so computer access for e-mail is quite restricted. You seldom have time to sit and read a full e-mail so, e-mails for me are failing us as secretaries. Doctors and nurses can shut their door in between clients. We don't have enough time.

As these individuals had limited time to check their e-mail they relied on "grapevine communication" to alert others to essential e-mail messages. "We don't always have time to check our e-mails ... so what happens is one person will see it and then pass it to the rest and then everybody's checking their e-mails." Finally, there were team members who were "not computer savvy" or who were perceived as being "afraid of the computer" and "not tenacious enough to figure it out," as they did not view it as "a priority."

Another important form of formal communication, which was more profession-specific, was the use of "communication logs" to transmit information about patient care issues. Communication logs were essential where team members held part-time positions or were job-sharing and rarely had face-to-face contact. "The nurses keep a log book so that we can jot things down and communicate important information to the nurses who are not here every day. That way nothing gets missed."

Informal communication

Informal communication was described by participants as the most prominent method of sharing and transferring information about patient care. In contrast, participants perceived formal communication methods as more related to administrative, policy, or business matters relevant to the team. Thus, on a day-to-day basis

"hallway" consultations and chats prevailed: "Mostly I use face-to-face communication. I find the person I want to speak to and talk to them directly." For patient care, face-to-face verbal communication was the preference: "I'm verbal. We can use the computer, but it's just easier to verbally pass information back and forth."

When face-to-face communication was not possible, "sticky notes" became the medium of communication: "Say a doctor is in with a patient, we'll just stick a note on the door and say 'Come see us, this has to be done.'" As one participant described, there could be a plethora of "sticky notes" on a given day: "Little notes attached to the computer or here, there, and everywhere." Another participant stated: "The sticky notes—they're my lifesaver!"

Many participants observed how the chosen method of communication reflected each team member's individual style or preference for a specific medium of communication.

Each of us has our own style of communication. Some of us still like to have sticky notes on the charts; some of us prefer to have the computer with the flashing message light telling us that there's something that we should be attending [to].

Team attributes facilitating communication

Participants identified specific attributes that facilitated communication in PHCTs, including approachability, availability, and proximity. Each attribute was interwoven with the others and served to foster both formal and informal means of communication within the PHCTs.

Approachability reflected team members' comfort and ease communicating with other members of the team. "If something is urgent that I want immediate action on, I find them and talk to the person Everybody's very approachable and you can talk to anybody, anytime." The attribute of availability was often assigned to team members with more authority or seniority who promoted an open-door policy. "My door's always open and there's always someone coming in and chatting about something." Proximity to one's colleagues was also highlighted: "We sit across from each other, so she would basically tell me if she thought there was something I should know." Proximity facilitated communication:

We share an office, so we're talking constantly, there's lots of back and forth to the front of the office, and the staff are in and out of our office ... catching us between patients and saying "I need to talk to you for a second."

Funding issues

Participants identified funding issues related to communication. For example, they expressed an interest in becoming more computerized to improve communication but

were limited by finances. "To go to a paperless office would be great, but we don't have the funding for that." Participants suggested that funded team meetings would promote communication and improve patient care. Having the ability to adequately reimburse all members of the team would enhance attendance and participation at team meetings. Currently team meetings were viewed as too brief to adequately cover all the issues, let alone strategize more broadly. As one participant stated:

If anything we don't have enough time to sort of work together. Because it's really busy so our team meetings are pretty much crammed, and we don't have as much time for the reflection that we like to have.

DISCUSSION

The study findings revealed the formal and informal means of communication used by PHCTs, as well as specific team attributes that facilitated communication. A considerable barrier to improving means and methods of communication on PHCTs was inadequate funding.

Study participants identified regularly scheduled team meetings as a vital mechanism for communication on the team. This builds on findings reported in previous studies.^{5,12,21,22} Craigie and Hobbs²¹ have described team meetings as a safe place to raise issues and to participate in a problem-solving process that is both respectful and collaborative. This can serve to build cohesive teams and to develop creative strategies to sustain teams when they are confronted by stressful situations or conflict.²² However, meetings themselves can be a source of stress if inadequate time and remuneration become an issue.²³ Furthermore, the location and timing of meetings can create tension among the team, particularly when certain agenda items are viewed by some members as mundane or not relevant to their roles.²⁴ One means to avoid some of these issues is to conduct clinical and administrative meetings at separate times.¹¹ When this is not feasible, it is important to create distinct agendas for each component of the meeting, including identification of the leadership or chair of designated agenda items. Teams must collectively agree upon required mandatory attendance by all members or identify which meetings are pertinent to specific groups only.¹¹ These issues need to be addressed for optimal communication to occur.

While the uptake of the electronic health record is still relatively low in Canada, the potential for this means of team communication is yet untapped and might indeed replace the "sticky note."²⁵ Study participants' views on the use of computerized communication were mixed and might reflect tension between early adopters and those individuals who lack computer skills or demonstrate minimal interest in this mode of

communication.²⁵⁻²⁷ For teams staffed by numerous part-time members who rarely had opportunities for face-to-face interactions, use of communication logs was important. This ensured smooth transfer of information about both patient care and administrative tasks. Only one other study in primary health care⁶ has reported similar findings regarding the use of communication logs by part-time team members; hence this mechanism warrants further exploration as a key communication tool in PHCTs.


Informal communication dominated the daily interactions of the participants as they described working together as a team. Communication about patient care issues needs to be immediate. Ellingson⁹ has described this as "backstage communication," which occurs outside of formal team meetings and is essential to the provision of patient care. Hallway consultations might remain the preferred means of communication for clinical and business matters that are time sensitive. As PHCTs grow in size, however, the hallway consultation might not be an effective communication strategy for administrative or organizational matters, although they might remain critical for core team communication about patient care. Hence, the accessibility and proximity of team members is essential, as our participants identified. Approachability, as described by our participants, extends previous work in the literature.²¹

New funding models for PHCT's, such as family health teams in Ontario, might eliminate concerns regarding remuneration and permit all team members, in particular family physicians, to be adequately compensated for their attendance at and participation in team meetings, both clinical and administrative. In addition, alternative financial arrangements might offset the costs of implementing computerized communication and therefore facilitate uptake of medical informatics, which have the potential to be an important communication medium.

Limitations

Our data did not reveal a development of a common or shared language among team members. The literature suggests that as teams evolve they co-create a shared or common language that enhances their communication.²⁸ Nor did our analysis uncover how the theoretical underpinnings of different disciplines on the team might have impeded communication.⁷ Both issues require future inquiry.

Conclusion

This study describes formal and informal mechanisms of communication currently used by PHCTs. Face-to-face, verbal communication was preferred for discussing patient care issues. Attributes that facilitated team communication, such as approachability, availability, and proximity of team members, were highlighted. New funding arrangements could alleviate concerns about remuneration for attendance at meetings. 

Research Mechanisms for communicating within primary health care teams

Dr Brown is a Professor at the Centre for Studies in Family Medicine at the Schulich School of Medicine & Dentistry and at the School of Social Work at King's University College at The University of Western Ontario in London. **Dr Lewis** is an Assistant Professor in the School of Social Work at King's University College. **Ms Ellis** is a doctoral candidate in Health and Rehabilitation Sciences in the Faculty of Health Sciences at The University of Western Ontario. **Dr Stewart** is a Professor in the Department of Family Medicine and Director of the Centre for Studies in Family Medicine at the Schulich School of Medicine & Dentistry. **Dr Freeman** is a Professor and Chair in the Department of Family Medicine at the Schulich School of Medicine & Dentistry. **Ms Kasperski** is the Chief Executive Officer of the Ontario College of Family Physicians in Toronto, Ont.

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Contributors

Dr Brown oversaw the implementation of the study, including data collection and analysis, conducted the literature review, and wrote all drafts of the manuscript. **Dr Lewis** collected the data, contributed to the analysis and interpretation of the findings, and assisted with writing the manuscript. **Ms Ellis** oversaw the technical aspects of the data analysis and contributed to the interpretation of the findings and the final manuscript. **Dr Stewart** contributed advice on the implementation of the study and assisted with editing the manuscript. **Dr Freeman** and **Ms Kasperski** were responsible for the original idea, designed the larger study from which this paper emanated, and reviewed final versions of the manuscript.

Competing interests

None declared

Correspondence

Dr Judith Belle Brown, Centre for Studies in Family Medicine, The Gordon J. Mogenson Bldg, 100 Collip Circle, Suite 245, UWO Research Park, London, ON N6G 4X8; telephone 519 858-5028; fax 519 858-5029; e-mail jbbrown@uwo.ca

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