Strengthening primary care with better transfer of information

Robert J. Reid MD PhD, Edward H. Wagner MD MPH

∞∞ See related research paper by van Walraven and colleagues, page 1013

The reality of modern health care is that patients commonly receive care from multiple providers, both physicians and nonphysicians, who often work in disconnected offices and facilities. This makes it a tremendous challenge to connect and integrate a patient's care into a coherent whole. Widespread lack of information continuity is troublesome because of the unnecessary tests, medical errors and inconsistent treatment plans that can result.[1] The transition from hospital to community care is a particularly vulnerable time when coordination lapses can result in serious adverse events.[2]

In this issue of *CMAJ*, van Walraven and colleagues uncover an unpleasant truth about the degree of clinical information that is transferred between community physicians in a large Canadian province.[3] In their well-designed prospective study that tracked 3250 patients for 6 months after discharge from hospital, physicians reported having information about the care provided by other physicians less than one-quarter of the time. It is likely that the authors underestimated the paucity of information available to physicians at the point of care if it is assumed that similar communication gaps occur with home care nurses, case managers, mental health professionals and other community-based practitioners.

Mechanisms to transfer information from one health care event to another are the basic ingredient that enable professionals to coordinate care over time and with each other. Coordination implies that not only must information be transferred but also that important details about prior events must be recognized and incorporated into current care decisions. Traditional methods for sharing information among health professionals, including hospital discharge abstracts, referral letters and visit summaries, have remained largely unchanged for decades. These vehicles were designed to work in the context of a well-delineated care sequence where one clinician consults or transfers care to another. Even in these circumstances, where there is an expectation for information transfer between clinicians, communication is often delayed, incomplete or absent altogether.[4]

Shared office records enable real-time information sharing among physicians in the same office but fall apart when other physicians are involved. When a patient's care trajectory involves unplanned visits crossing multiple physicians in multiple offices, it is not surprising that these mechanisms fail and large information gaps emerge. Thus, faced with no or inadequate information about prior care at their fingertips, physicians are either left to track down this information during or after a visit, or to ask patients directly about their prior laboratory results, prescribed medications and management plans.

Key points

- Traditional ways of transferring health care information among professionals are inadequate for care to be continuous and tightly coordinated.
- Although interoperable (compatible) electronic health records will greatly improve information availability at the point of care, they will not ensure that care is integrated.
- Care integration is most effective and efficient when patients have ready access to primary care clinicians with whom they have strong relationships.
- Primary care clinicians should take responsibility for coordinating "whole person" care over time and make use of information systems to meet this goal.
- Improvements are not only needed in information sharing among clinicians but also in information sharing with patients to support self-management.

Since many patients leave their doctor's office without understanding what they were told,[5] the use of a patient's memory as the main vehicle for information continuity is problematic.

In Canada, the main policy response to this information conundrum has been the promotion of interoperable (compatible) electronic health records, which have the ability to pass health information seamlessly between professionals. Care systems such as Kaiser Permanente and the US Veterans Health Administration have demonstrated that comprehensive clinical information systems are indeed possible, albeit in closed delivery systems. Canadian governments have invested substantial sums toward the goal of providing 50% of Canadians with a compatible record by 2010. Although important progress is being made, achievement of this ambitious goal is threatened by insufficient funding, complex data portability requirements, slow adoption rates, and privacy concerns.[6]

Although compatible electronic health records will vastly improve the availability of health care information, they will not ensure that care is coordinated. To accomplish this, it is vitally important that primary care systems also be strengthened. Primary care provides a focal point where information about a patient's constellation of care can be gathered, sequenced and melded. When patients have ready access to primary care clinicians with whom they have enduring relationships and who take responsibility to integrate care across their health concerns and over time, patients achieve better health outcomes at lower costs.[7] Sustained relationships also allow clinicians to accumulate tacit information that cannot be

Robert Reid and Edward Wagner are with the Group Health Center for Health Studies, Seattle, USA

DOI:10.1503/cmaj.081483

easily written or transmitted in medical records, including their patients' social context, values and preferences.[8] In contrast, dispersion of care across multiple clinicians and care settings undermines the benefits of strong longitudinal relationships and places added demands on information transfer and care coordination.

The "patient-centred medical home"[9] is an emerging model of primary care that seeks to improve all aspects of continuity simultaneously — information flow, longitudinal relationships and management of health problems over time.[10] In this model, the relationship between the patient and the primary care clinician is at the core, and delivery systems are explicitly reorganized to promote and sustain these relationships. Primary care clinicians lead clinical teams and are responsible for coordinating "whole person" care across comorbidities. Care is moved from a reactive mode to more of a proactive mode by reaching out to patients to engage them in care planning and self-management. Advanced information technologies are used not only to archive and organize information streams but also to create registries, prompt evidence-based care, flag safety concerns and actively engage patients in their own care. Access, patient satisfaction and efficiency can potentially be enhanced by reshaping the means by which patients and clinicians communicate using information technology-based secure email and telephone-call management systems.

Implicit in the concept of the patient-centred medical home is the recognition that care is a longitudinal process and is not simply a series of isolated events. There is the clear expectation that health professionals are obliged to provide one another with adequate information on diagnostic results, treatment decisions and management plans. Information sharing, however, should not end there: information must also be shared directly with patients and care plans developed collaboratively. One strategy is to provide printed computerized summaries to patients at the end of each visit detailing their health problems, laboratory results, medications, care plans and follow-up appointments. Patients perceive that that such summaries improve their understanding of their care and assist them to adhere to treatment plans.[11] In systems without compatible electronic health records, these summaries can also facilitate physician-to-physician communication when patients take the summaries to future appointments.

In a 2006 survey of primary care physicians in 7 industrialized nations, Canadian physicians reported a lack of practice infrastructure common in other countries including clinical information systems, mechanisms to coordinate care, and the use of nonphysicians providers to assist with chronic illness management.[12] However, new models that incorporate many of the concepts of the patient-centred medical home (including expanded access and multidisciplinary team-based care) are gaining momentum across Canada.[13] It is vital that these new primary care models take into account the central role they play in coordinating care for patients across the continuum. These models should not only leverage advanced information technologies but also value and support primary care clinicians in assuming the responsibility for this task.

Competing interests: None declared.

Contributors: Both of the authors contributed to the content of the article, revised it critically and approved the final version submitted for publication.

REFERENCES

1. Bodenheimer T. Coordinating care — a perilous journey through the health care system. *N Engl J Med* 2008;358:1064-71.
2. Coleman EA, Berenson RA. Lost in transition: challenges and opportunities for improving the quality of transitional care. *Ann Intern Med* 2004;141:533-6.
3. Van Walraven C, Taljaard M, Bell CM, et al. Information exchange among physicians caring for the same patient in the community. *CMAJ* 2008;179:1013-8.
4. Forrest CB, Glade GB, Baker AE, et al. Coordination of specialty referrals and physician satisfaction with referral care. *Arch Pediatr Adolesc Med* 2000;154:499-506.
5. Crane JA. Patient comprehension of doctor–patient communication on discharge from the emergency department. *J Emerg Med* 1997;15:1-7.
6. Canada Health Infoway. *The E-volution of health care: making a difference. Annual report 2007–2008*. Toronto (ON); 2008.
7. Starfield B, Shi L, Macinko J. Contribution of primary care to health systems and health. *Milbank Q* 2005;83:457-502.
8. Haggerty JL, Reid RJ, Freeman GK, et al. Continuity of care: a multidisciplinary review. *BMJ* 2003;327:1219-21.
9. Davis K, Schoenbaum SC, Audet AM. A 2020 vision of patient-centered primary care. *J Gen Intern Med* 2005;20:953-7.
10. Guthrie B, Saultz JW, Freeman GK, et al. Continuity of care matters. *BMJ* 2008;337:548-9.
11. Tang PC, Newcomb C. Informing patients: a guide for providing patient health information. *J Am Med Inform Assoc* 1998;5:563-70.
12. Schoen C, Osborn R, Huynh PT, et al. On the front lines of care: primary care doctors' office systems, experiences, and views in seven countries. *Health Aff (Millwood)* 2006;25:w555-71.
13. Hutchison B. A long time coming: primary healthcare renewal in Canada. *Healthc Pap* 2008;8:10-24.

Correspondence to: *Dr. Robert J. Reid, Group Health Center for Health Studies, 1730 Minor Ave., Suite 1600, Seattle WA 98101, USA; fax 206 287-2871; reid.rj@ghc.org*