



the Translator

Canadian Pharmacy ► Research ► Health Policy ► Practice ► Better Health

Making it work: Pharmacist integration into collaborative teams

This issue of the Translator examines research on pharmacists in collaborative patient care including strategies for implementing and supporting collaboration among health care providers.

- Non-co-located community-based health care teams can improve health care outcomes of complex patients
- Benefits of pharmacist-physician pairings may be impeded by a disconnect in perceptions of pharmacists and physicians
- Narrative reports help monitor and evaluate collaborative health care interventions
- Tool helps assist pharmacist integration in primary care settings

Non-co-located community-based health care teams can improve health care outcomes of complex patients

Farris KB, Côté I, Feeny D, Johnson JA, Tsuyuki RT, Brilliant S, Dieleman S. Enhancing primary care for complex patients: demonstration project using multi-disciplinary teams. *Canadian Family Physician*. 2004; 50: 998-1003.

Issue: Community-based health care providers sporadically communicate to each other and often do not have the opportunity to collaborate on treatment goals and follow up. It is important to implement collaborative community based care approaches among providers not located in the same clinic.

A solution: This study sought to improve medication use and the health status of high-risk¹ community dwelling patients through the formation of six non-co-located Primary Health Care Teams (PHCTs). Throughout the study teams met weekly for 1.5 hours

Medication adherence was improved at three months.

to discuss patient care and medication-related issues. Pharmacists conducted medication reviews for patients (182 medication reviews out of a possible 199 patients) and presented patient's medication histories to the team. Medication or health issues were then identified by the team and selected to be resolved. When necessary, follow up was completed by telephone or in person. Teams also had regular meetings

every six to eight weeks to discuss any outstanding issues.

Implications: Throughout the study patients' health status was maintained and there was a trend toward fewer visits to physicians, fewer hospital admissions and fewer emergency department visits. Teams identified an average of 3.9 issues per participant with decline in health status being the most common care issue identified. Medication adherence was improved at three months. Most providers found that working in a team was helpful and most felt they had more information and a clearer

¹High-risk patients were identified as those with one of the following: three or more routine medications daily, at least one poorly controlled chronic disease, at least one untreated chronic disease, dosage regimen changes more than four times in the previous year, medications with narrow therapeutic indices, an identified or potential drug-related problem, a history of non-compliance or a recent decline in health status.

Non-co-located community-based health care teams can improve health care outcomes of complex patients

understanding of the other providers' respective roles in the health care system. This study demonstrated that a dispersed community-based team model has promise and could be easily implemented to target high users of the health care system or people meeting certain 'high-risk' criteria. Decision makers should consider implementing supports and compensation frameworks to facilitate this type of collaborative practice.

Background or research methods:

This study was conducted in Alberta from September 1999 to April 2000. Each PHCT involved in this study consisted of a family physician, pharmacist and nurse. Three of the six teams also included a nurse from a family physician's office. Teams underwent 4.5 hours of team development training. The six teams recruited 199 patients from study physicians' rosters over four months. A structured questionnaire was mailed

at baseline, three months and six months to determine patients' medication adherence, health status and health care system use. The evaluation used a single group pre-post design and focused on the combined effect of the PHCT. □

Financial Support: This study was supported by Health Transition Fund (Health Canada) and Alberta Health and Wellness.

Benefits of pharmacist-physician pairings may be impeded by a disconnect in perceptions of pharmacists and physicians

Howard M, Trim K, Woodward C, Dolovich L, Sellors C, Kaczorowski J, et al. Collaboration between community pharmacists and family physicians: lessons learned from the seniors medication assessment research trial. *Journal of the American Pharmacists Association*. 2003; 43(5): 566-72.

Issue: The inappropriate use of medications leads to Drug Related Problems (DRPs) and medication-related hospitalizations that cause harm to patients and increase costs to the healthcare system.² Given that most prescribing occurs in primary care settings, and that Expanded Role Pharmacists (ERPs) can improve prescribing and patient outcomes,³ collaborative care that includes pharmacists and primary care physicians has the potential to improve medication use and decrease hospital and prescribing costs.⁴ Much has yet to be learned, however, about how such collaboration is actually achieved in the practice setting.

A solution: The Seniors Medication Assessment Research Trial (SMART)

created 24 physician-ERP pairs who worked together to improve drug therapy for elderly patients. Six of these pairs were interviewed to identify shortcomings of the program, obstacles to its implementation and strategies to overcome these obstacles.

Implications: Physicians reported learning new information from their ERP counterparts. This included identification of patients' medication interactions with over-the-counter medications, information about the optimal timing for drug delivery, and the identification of problems with patients' medication adherence. Results of the study also suggested that there is a disconnect between the role physicians expected ERPs to play and the

role ERPs expected to play in the provision of care. It also revealed potential challenges to this type of collaboration including participants' limited experiences with this type of interaction as well as physicians' concerns about the (financial) sustainability of engaging pharmacists in this role on a regular basis. Physicians agreed that as long as they were practicing in a fee-for-service model, they could not pay a pharmacist to work in their practice. However, if funded by the government pharmacists could be paid in a fee-for-service basis for a block of time per week.

² MacKinnon N. Preventable drug-related morbidity and mortality in older adults: a Canadian cost-of-illness model. *Canadian Pharmacists Journal*, 2002; 135: 47-8.

³ Granas AG, Bates I. The effect of pharmaceutical review of repeat prescriptions in general practice. *International Journal of Pharmacy Practice*, 1999; 7: 264-75.

⁴ Jameson J, Van Noord G, Vanderwoud K. The impact of a pharmacotherapy consultation on the cost and outcome of medical therapy. *Journal of Family Practice*, 1996; 41: 469-72.

Background or research methods:

Twelve interviewees were selected using a specific sampling strategy that identified six ERP-physician pairs. Based on the results of satisfaction questionnaires, ERP-physician pairs were ranked in terms of the pair's functioning. Open-ended, face-to-face interviews were directed by an interview

guide and were conducted within four weeks of the study's completion. Interviewers experienced in qualitative research asked participants about their perceptions of the program, which aspects of the program worked well and which did not, the advantages and disadvantages for physicians and the obstacles to implementation of the

program on a wider scale. The trends and themes that emerged from the interviews were compiled and analysed using Lotus Approach 97.

Financial Support: This study was supported by Health Transition Fund (Health Canada) grant ON-221.

Narrative reports help monitor and evaluate collaborative health care interventions

Pottie K, Haydt S, Farrell B, Dolovich L, Sellors C, Hogg W. Narrative reports to monitor and evaluate the integration of pharmacists into family practice settings. *Annals of Family Medicine*. 2008; 6(2):161.

Issue: Primary health care research is often focused on evaluating the initiation, management and outcomes of interventions. Effective documentation and analyses of such interventions is necessary to determine their efficacy and feasibility. Such analysis requires methods that capture the experience and perspective of the individuals involved. The IMPACT (Integrating family Medicine and Pharmacy to Advance primary Care Therapeutics) project promotes innovative care through the integration of non-dispensing pharmacists into family practices in Ontario. Feedback on the benefits and limitations of this intervention is critical to the process.

"...narrative reporting provided a glimpse into the experiences of the integrated pharmacists and served as a tool for program monitoring, support and calibration."

A solution: Narrative reports are qualitative research tools that document the processes of an intervention. They provide decision makers with the information they need to help improve intervention processes and outcomes. In the case of the IMPACT project, narrative reporting provided a glimpse into the experiences of the integrated pharmacists and served as a tool for program monitoring, support and calibration. The process of narrative reporting

documented pharmacist observations, struggles and successes and ideas for practice innovation.

Implications: The narrative reporting process used in this study provided "a window" on the functioning of the pharmacist interventions in the IMPACT project. Pharmacists' narratives highlighted challenges that lead to solutions including the implementation of early mentoring and clinical supports to improve the overall outcome of the intervention. Decision makers can look to narrative reports for evidence of the need for supports and adjustments to interventions as well as detailed accounts that will help in the development of intervention improvements.

Background or research methods:

The IMPACT project was implemented in seven Ontario-based group family practices that had 7 to 14 physicians per practice. None of the interdisciplinary teams had experience working with a pharmacist as an integrated professional in their practice setting. The narrative reporting process involved

the collection of monthly narrative reports from integrated pharmacists during one-year period. Participating pharmacists were provided with tips for making practice observations and constructing stories. All reports were reviewed and analysed by the research team using an iterative grounded theory approach. Analysts immersed

themselves in the reports using immersion/crystallization and one analyst used NVivo coding software to organize the data. □

Financial support: IMPACT was a large-scale demonstration project supported by the Ontario Primary Health Care Transition Fund (2004-2006).



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Tool helps assist pharmacist integration in primary care settings

Farrell B, Pottie K, Woodend K, Hua Yao V, Kennie N, Sellors C, et al. Developing a tool to measure contributions to medication-related processes in family practice. *Journal of Interprofessional Care*. 2008; 22(1): 17-29.

Issue: Team-based collaborative care is an effective strategy for the management of patients' complex drug therapy needs.⁵ This type of care, however, requires team members to understand and respect the roles played by their colleagues.^{6,7,8} A better understanding of providers' perceptions of team members' roles can help improve health outcomes for patients by enhancing the quality of care provided in a collaborative setting. Strategies or mechanisms that measure team members' perceptions of roles are needed in order to maximize the impact of team based collaborative care.

A solution: The Medication Use Processes Matrix (MUPM) was designed to measure different primary health care professionals' perceptions of team members' contributions to medication-related processes that occur in the primary health care setting. The development of this tool included creating a list

MUPM: Medication Use Processes Matrix



of medication-related processes occurring in primary care and various roles played by professionals involved in the provision of care. The MUPM tool consisted of 22 processes grouped in five categories - diagnosis/prescribing, monitoring, administrative/documentation, education, medication review. Assessing the contributions of the physicians and pharmacists to medication

related processes helped shed light on ways to improve collaboration amongst practitioners in a collaborative setting.

Implications: The MUPM documented and measured the perceived contribution to medication prescribing and monitoring processes. The data revealed that family physicians gave higher ratings to their own profession's contribution in monitoring and administration/documentation compared to pharmacists' assessment of physician contribution. At the same time, pharmacists rated their contributions higher in diagnosis and prescribing compared to family physician or office staff's ratings of pharmacist contribution. Given the importance of role recognition and articulation for improving quality of collaborative care,⁹ decision makers can use this tool to identify ways for making improvements in the quality of care provided by teams.

⁵Romanow Commission. Building on values: The future of health care in Canada. Final Report, 2002. Ottawa: Commission on the Future of Health Care in Canada.

⁶Dieleman S, Farris K, Feeny D, Johnson J, Tsuyuki R, Brilliant S. Primary health care teams: team members' perceptions of the collaborative process. *Journal of Interprofessional Care*, 2004; 18: 75-8.

⁷San Martin-Rodriguez L, Beaulieu M, D'Amour D, Ferrada-Videla M. The determinants of successful collaboration: A review of theoretical and empirical studies. *Journal of Interprofessional Care*, 2005; 19 (Suppl. 1): 132-47.

⁸Way D, Jones L, Busing N. Implementation strategies: Collaboration in primary care-family doctors and nurse practitioners delivering shared care. *Ontario College of Family Physicians*, 2000: 1-12.

⁹Farris, K. Relationships and responsibilities are critical to team care in medication management. *Research in Social and Administrative Pharmacy*, 2005; (1): 369-74.

Background or research methods:

The research team developed the MUPM tool within the IMPACT (Integrating family Medicine and Pharmacy to Advance primary Care Therapeutics) project and assessed content validity using a standardized questionnaire focused on "clinical sensibility".

Three drafts of the MUPM were reviewed over a six week period. The final draft of the MUPM included 22 medication-related processes along with 5 columns of potential team member contributors to the processes. Ninety-one questionnaires were returned from the survey conducted at

the third month of pharmacist integration. The response rates were 75% for physicians and 100% for pharmacists. □

Financial Support: IMPACT was a large-scale demonstration project supported by the Ontario Primary Health Care Transition Fund (2004-2006).

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