Examining organizational change in primary care practices: experiences from using ethnographic methods

Grant Russell\textsuperscript{a}, Jenny Advocat\textsuperscript{a,*,} Robert Geneau\textsuperscript{b}, Barbara Farrell\textsuperscript{c}, Patricia Thille\textsuperscript{d}, Natalie Ward\textsuperscript{e} and Samantha Evans\textsuperscript{e}

\textsuperscript{a}Southern Academic Primary Care Research Unit, Monash University, Melbourne, Australia, \textsuperscript{b}International Development Research Centre, Ottawa, \textsuperscript{c}Department of Family Medicine, University of Ottawa, Ottawa, \textsuperscript{d}Department of Sociology, University of Calgary, Calgary and \textsuperscript{e}Elisabeth Bruyere Research Institute, University of Ottawa, Ottawa, Canada.

*Correspondence to Jenny Advocat, Building 1, 270 Ferntree Gully Road, Notting Hill, Victoria 3168, Australia;
E-mail: jenny.advocat@monash.edu

Received 22 June 2011; Revised 6 November 2011; Accepted 7 November 2011.

Background. Qualitative methods are an important part of the primary care researcher’s toolkit providing a nuanced view of the complexity in primary care reform and delivery. Ethnographic research is a comprehensive approach to qualitative data collection, including observation, in-depth interviews and document analysis. Few studies have been published outlining methodological issues related to ethnography in this setting.

Objective. This paper examines some of the challenges of conducting an ethnographic study in primary care setting in Canada, where there recently have been major reforms to traditional methods of organizing primary care services.

Methods. This paper is based on an ethnographic study set in primary care practices in Ontario, Canada, designed to investigate changes to organizational and clinical routines in practices undergoing transition to new, interdisciplinary Family Health Teams (FHTs). The study was set in six new FHTs in Ontario. This paper is a reflexive examination of some of the challenges encountered while conducting an ethnographic study in a primary care setting.

Results. Our experiences in this study highlight some potential benefits of and difficulties in conducting an ethnographic study in family practice. Our study design gave us an opportunity to highlight the changes in routines within an organization in transition. A study with a clinical perspective requires training, support, a mixture of backgrounds and perspectives and ongoing communication.

Conclusions. Despite some of the difficulties, the richness of this method has allowed the exploration of a number of additional research questions that emerged during data analysis.

Keywords. Ethnography, interdisciplinary care, phc, primary care, qualitative methods.

Introduction

Qualitative methods are an important part of the primary care researcher’s toolkit, providing a nuanced view of the growing complexity in primary care reform and delivery. While quantitative studies test hypotheses and measure outcomes, some forms of qualitative research gather multiple perspectives to gain a new understanding of a given social context and generate evidence about why and how phenomena unfold.\textsuperscript{1} Ethnographic research is a comprehensive approach to qualitative data collection that includes observation, in-depth interviews and document analysis.

This paper examines some of the challenges of conducting an ethnography in the context of changing models of primary care in Canada, where there have been major reforms to traditional methods of organizing primary care services in recent years.\textsuperscript{2,3}

The province of Ontario has invested heavily in a new model of primary care delivery—Family Health Teams (FHTs), 170 of which have been created since April 2005.\textsuperscript{4,5} FHTs are primary care practice organizations that bring together family physicians, nurses, nurse practitioners and other health professionals including pharmacists, dieticians and social workers. Their mandate is to improve access, link patients with community resources and optimize preventive care and chronic illness management.\textsuperscript{5} The implementation of FHTs was likely to be complex; new, interdisciplinary models of health care delivery have been characterized by challenges to traditional routines, roles and relationships of health care professionals and patients.\textsuperscript{6-8}
Organizational theorists have long acknowledged the relationship between the concept of organizational ‘routines’ and organizational ‘change’. Defined as ‘patterns of behaviours that are followed repeatedly, but are subject to change if conditions change,’ and as basic components of organizational behaviour, routines have occasionally been used as a unit of analysis in primary care research. Routines provide a perspective for evaluating what change ‘really is’ at the organizational level, and allow researchers to map organizational change by focusing on microlevel dynamics.

Ethnography has a long and rich history within social science and has been used more widely in health services research in recent years. Ethnographies have been conducted in many different health settings, some within primary care. This approach was used by Crabtree et al. in their direct observation studies in US family practice settings and by Whittaker in Australian general practice. Other ethnographic studies have examined a wide range of issues in primary care, including the role of pharmacists, confidentiality in waiting rooms, physician/patient interactions, barriers to care, knowledge management, electronic medical records and chronic disease and poverty. Studies such as these demonstrate how ethnographic methods are useful to provide a deeper understanding of the processes of collective ‘sense making’ by which knowledge and practices are negotiated, constructed and internalized in daily professional life for a wide variety of concerns. These studies use ethnographically informed techniques for understanding complex issues in primary care.

Some ethnographic studies also focus directly on organizational change and primary care reforms but few papers report on the methodological issues associated with conducting ethnographic studies in general practice. We use the term ‘ethnography’ to refer not only to in-depth interviews and document analysis, another common qualitative method, but also non-participant observation over a prolonged period of time. This paper highlights the logistic and ethical challenges arising from conducting qualitative research in the complex setting of changing models of primary care in the Canadian context, and considers issues specific to qualitative methods, providing practical advice on how to conduct ethnographic research in this setting. Here we focus on methodological challenges and lessons for ethnographic and other qualitative researchers in primary care settings.

Methods

The ethnographic study on which the reflections in this paper are based, Behind the Closed Door: Using Ethnography to Understand Family Health Teams, was funded by Ontario’s Ministry of Health and Aged Care. Investigators included an academic family physician, an organizational sociologist (PhD) with extensive experience in ethnography and health services research and an academic pharmacist who had led a recent study of pharmacist integration in primary care practices. Over the course of the study, five ethnographers were involved in data collection and/or analysis. All had, at minimum, a master’s degree in social science and experience in qualitative research. None were actively working as clinicians. Study activities were coordinated by a study administrator.

The study used mixed methods (see Table 1) and was conducted between 2007 and 2009. The study aimed to illustrate how the transition into an FHT influences organizational and clinical routines, particularly those relating to the care of persons living with chronic illness.

The study was implemented in a purposefully selected maximum variation sample of six newly established FHTs. Our maximum variation sampling method was based on governance model and location (rural/urban), based on a publicly available list. We excluded FHTs yet to recruit non-medical professionals or those located beyond 600 km of the recruitment centre in Ottawa. Despite the well-documented difficulties of recruitment in primary care, we found practice recruitment to be relatively easy: six of the 10 FHTs approached consented. Most of the FHTs welcomed the practice recruitment visit of one of our two principal investigators and seemed reassured by the presence of the two clinicians on the study team.

Our resulting sample of six newly formed FHTs operated in different geographical contexts (three urban, two semi-rural and one rural) and under varied governance models (four were physician owned, one operated by a rural municipality and one was academic FHT operating as part of an Academic Health Science Centre). Three of the FHTs operated from more than one geographic location and were staffed by nurses, nurse practitioners, allied health providers and between 4 and 20 family physicians. All practices accepted the $3000 provided to each FHT to defray the opportunity costs of participation.

As the focus of this study was on organizational and clinical routines relating to chronic disease management, FHTs were invited to choose a chronic health condition most relevant to their practice to be the focus of data collection. Four practices chose diabetes, one chose chronic obstructive pulmonary disease and one chose hypertension. Following broad practice consent, we recruited individual clinicians and administrative staff by asking for their consent to be interviewed and/or observed in their daily work. Consenting family physicians in each FHT identified up to eight patients with the nominated chronic condition for subsequent interview and/or observation. These patients and patients who were present while we were observing provider activities also provided written consent.
Ethnographers were ‘embedded’ into FHTs for up to a total of 25 days over 15 months. While in the FHTs, the ethnographers observed clinical and administrative practice activities, interviewed patients, clinicians and administrative staff, analysed practice documents (such as FHT business and operating plans, orientation manuals and clinical protocols) and patient information materials. The data were augmented by interviews with key informants from government and professional bodies and with review of relevant publications from the Ontario Ministry of Health and Long-Term Care and Ontario-based professional organizations. Practice staff were asked to complete a modified version of the Team Climate Inventory44 twice, early and late in data collection.

The study team provided oral and written feedback to the FHTs at midpoint and the conclusion of the study. Findings have been presented elsewhere.45

In this paper, we highlight many of the challenges of conducting fieldwork in the complex world of primary care. Reflexivity is an important concept in ethnography, referring to an ongoing and analysis and evaluation of the researcher’s own actions.46 The reflective analysis presented here is made possible by the ongoing data workshops held by the researchers and other strategies of the research team that we discuss below in the section, Developing a productive research team. This reflexivity took place throughout the study and we gather our findings here (The authors of this paper were all involved in the original study, including ethnographic data collection and analysis except JA who joined the team following the end of the study.) to assist prospective ethnographic researchers and primary care clinicians who might like to get involved in research in the future.

### Results

Here we highlight some distinct lessons about conducting an ethnographic study in a primary care setting.

#### Early steps

Like other qualitative health researchers, we found it difficult to obtain ethics approval for our research.47,48 The main barrier was the difficulty that the hospital-based Research Ethics Board (REB) experienced in identifying a reviewer with sufficient experience to review what seemed to the REB to be a novel methodology. This problem delayed study commencement by several months. An informal briefing with the Board may have reduced the delay, allowing the research team to help identify reviewers and clarify areas of potential concern. The difficulties of ethical review for observational research have been explored in detail by others,47 but are worth mentioning here because of the impact the process can have on conducting timely policy relevant research.

<table>
<thead>
<tr>
<th>Administrative routines</th>
<th>Team interaction</th>
<th>Patient–provider interactions</th>
<th>Miscellaneous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct observation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>● Greetings</td>
<td>● Formal and informal, verbal and non-verbal interactions and communications among health care professionals and with administrative team members</td>
<td>● Clinical consultations (family physicians, nurse practitioners, allied health)</td>
<td>● Sketches of practice layout, including clinical consultation areas.</td>
</tr>
<tr>
<td>● Booking appointments</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>● Rostering of patients</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>● Back office routines</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interviews</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>● Key administrative practice members interviewed during initial observation visits and again at final visit</td>
<td>● During initial 2-week visit and again at final visit</td>
<td>● With both patient and professionals (separately) following observed visits and at intervals during the 15 months of data collection. Some telephone interviews.</td>
<td>● Key informant interviews with decision makers and with members of nursing and medical professional associations.</td>
</tr>
<tr>
<td>Document review</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>● FHT proposal</td>
<td>● Internal communications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>● FHT operating and business plan</td>
<td>● Meeting agendas and minutes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>● Practice performance data.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Team Climate Inventory</td>
<td>● Survey administered to clinical and non-clinical staff in the first and second phase of data collection</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Table 1 Summary of data collection activities

- Direct observation
  - Greetings
  - Booking appointments
  - Rostering of patients
  - Back office routines

- Interviews
  - Key administrative practice members interviewed during initial observation visits and again at final visit

- Document review
  - FHT proposal
  - FHT operating and business plan
  - Practice performance data.

- Team Climate Inventory
  - Survey administered to clinical and non-clinical staff in the first and second phase of data collection

- Administrative routines
  - Clinical consultations (family physicians, nurse practitioners, allied health)
  - Group meetings.
  - Outreach visits

- Miscellaneous
  - Sketches of practice layout, including clinical consultation areas.
  - Audio-recordings of clinical consultations.
  - Preparation of practice genograms.
  - Key informant interviews with decision makers and with members of nursing and medical professional associations.
Implementing the study
The ethnographers observed formal and informal interdisciplinary, provider–patient and other routines in the waiting room and in accessible administrative, reception and clinical areas of the FHT. Observation was oriented towards better understanding management routines for the chronic illness nominated by each FHT.

The ethnographers arranged early observational activities around a structured profile of the context, history, organizational and physical structure of the practice using the ULTRA tool,49 a data organizational tool originally designed in the USA and modified for the current methods of delivering primary care in Canada (see online supplementary material). The profiles were modified over the observation period to reflect ongoing changes in FHT structure and function. Data collected from non-participant observation was recorded as field notes, supplemented by handwritten outlines, audio-recordings and end-of-day summaries.

Once data collection began, most family physicians, nurses and allied health professionals were happy to be observed during consultations and other patient activities. However, some mental health clinicians and social workers refused to be observed during consultations with patients, citing concerns about patient confidentiality. We were also unable to gain permission to observe meetings of any FHT boards and management groups.

It was clear that our relatively short time in the field compromised our ability to develop enough trust within the FHT to allow more sensitive observations. While many governance issues could be gleaned from document analysis and staff interviews, a more participatory methodology to develop ongoing relationships with the FHT boards and some providers prior to the start of data collection would be a priority in future studies. In addition to a participatory methodology, our experiences illustrate that it is important to not only engage staff at the management level, but with an ethnographic design, researchers must also work closely with all providers on the ground to build their trust.

Other practical problems with observation arose around the innovative activities that FHTs employed to deliver primary care services. For example, it was difficult to gain patient consent to observe group education sessions and outreach visits conducted by providers with homeless people. Although we communicated regularly with the REB and modified a number of consent forms, the dynamic nature of the study context meant some potential data were inaccessible.

Gathering data within clinical encounters
Ethical challenges did not end with formal approval, which was eventually granted. As others have noted, obtaining informed consent from study participants in the field can be logistically difficult.47 In addition to the eight patients with the chronic disease of choice, this project included observation of consultations with the general patient population. We needed to obtain signed consent from patients prior to observation of each patient–provider encounter. This was a simple task with longer visits, but it was much more difficult when we attempted to observe consecutive patients attending for family physician visits within a 10- to 15-min appointment schedule. We found it almost impossible to allow consecutive patients to read, understand and sign a consent form without disruption of patient flow. For our project, a compromise of observing alternate appointments worked, albeit at the cost of missing data. Alternatively, another field worker could obtain patient consent in parallel, or, using closed circuit means to record consultations for later viewing. The complex explanations required made it impractical to use receptionists or other practice staff in the consent process.

Collection of interview data and clinical encounters
Patient interviews with the eight nominated patients with the chronic disease of interest were more straightforward to schedule (All interviews were audio recorded and professionally transcribed.). Initial patient interviews explored illness experience, while follow-up interviews were more specific to their chronic illness care. Our approved design also allowed us to audio record and subsequently analyse all the patient-clinician interactions of these eight patients, even those that occurred when the ethnographers were not present. This method proved difficult to implement in the complex world of the primary care practice. Ethnographers left digital recorders and study information at the FHT, but interval visits were rarely recorded without the presence of the ethnographer. This strategy was too difficult to implement without their presence and recordings were often not made when they were not in the FHT to oversee data collection.

While we did manage to obtain some patient/provider recordings outside periods of field observation, comprehensive longitudinal records with a qualitative component could only be obtained with a different approach that would not depend on practice staff. Alternatives could include increasing researcher presence, or, with practices located close to the study centre, and the field researcher could liaise regularly with the patient, with visits occurring in concert with ongoing chronic care.

We also conducted semi-structured, in-depth interviews with providers and administrative staff. Initial provider interviews explored experiences relating to the organization of the practice and interdisciplinary collaboration, while follow-up interviews explored the delivery of chronic illness care and the integration of other health professionals.

Despite the straightforward nature of interviews, some unforeseen problems arose. A number of clinicians left the FHTs between the first and second year...
the structured profile of the context, his routines for the chronic illness nominated by each FHT. Observation was waiting room and in accessible administrative, reception, disciplinary, provider–patient and other routines in the
implemented the study
The ethnographers arranged early observational activities around the innovative activities that FHTs employed around the chronic care.

Implementing the study

Once data collection began, most family physicians, other health professionals.

Gathering data within clinical encounters

Patients were recruited to the study to participate in an investigation of new service models. This required obtaining informed consent from study participants in all clinics. Despite the interest and willingness of some to talk with us after they had left, it was clear that our relatively short time in the field could be logistically difficult. In addition to obtaining informed consent from study participants in all clinics, the team needed to work closely with all FHT boards and some providers prior to the start of the study in the respective clinics. This required a participatory methodology, engaging the experts and stakeholders to make results useful.

Collecting patient data

Patient interviews with the eight nominated patients provided rich insights into the experiences of patients with chronic disease. Patient interviews explored illness experience, while provider interviews explored experiences relating to delivery of chronic illness care and the integration of patient care. For example, it was straightforward to schedule (All interviews were audio recorded. For our project, a compromise of observing alter- native settings such as waiting rooms, consultation rooms, and sign a consent form without disruption of patient task with longer visits, but it was much more difficult when we attempted to observe consecutive patients at-tending appointments. We found it almost impossible to gain patient consent to observe group education in primary care settings.

Table 2

<table>
<thead>
<tr>
<th>Paper section</th>
<th>Potential problems</th>
<th>Possible solutions</th>
</tr>
</thead>
</table>
| Methods       | Recruitment for a complex and potentially intrusive design | • Senior clinical investigator recruitment visits, willingness for detailed and targeted feedback to each practice, allowing direct relevance of study findings.  
• Early adopter effect.  
• Payment to acknowledge potential disruption to clinical routines. |
| Early steps    | Traditional biomedical REBs can be challenged by complex qualitative methodology | • Discussing ethnographic projects such as this with the appropriate ethics board in advance, and if needed, taking steps to identify appropriate reviewers prior to submission. |
| Implementing the study | Access to traditionally ‘hidden’ practice routines | • Detailed explanation of study and ethical issues to all staff.  
• Research in this context should have a participatory methodology, engaging the participants to make results useful. |
| Gathering data within clinical encounters | Efficiently gaining patient consent without disrupting traditional clinical routines. | • Difficulties around gaining access to a large number of patients in the field requires  
• Increasing researcher presence (more time or adding second fieldworker specifically dedicated to patient consent)  
• Ongoing liaison with administrative staff to coordinate schedules  
• Use, if available, of closed circuit viewing or video-recording of consultations. |
| Collection of clinician perspective over time. | Practice-level consent | • Ethics committees require consent of practice and participating practitioners. This provides an impediment to longitudinal studies in primary care:  
• Staff turnover in primary care practices can mean that valuable follow-up data from providers who have left the practice can be complicated to obtain. This should be acknowledged in ethics applications, otherwise potentially rich data may be lost.  
• Access to activities such as outreach visits to homeless require articulation in study consent material. |
| Developing a productive research team | Researchers need high-quality social science skills combined with knowledge and understanding of the world of primary care. | • The use of non-clinician ethnographers added to the rigour of the methodology, and clinicians on the research team provided insider understandings of primary care and allowed the team to focus on the important aspects of the changes they were observing.  
• We adopted a program of intensive orientation to primary care for the ethnographers, interpreted data amongst the team as it was being collected and highlighted reflexivity in our team analysis meetings.  
• Our success in exploiting the rich diversity of the research team depended upon our ability to communicate effectively, something enhanced by both training and rich communication mechanisms. Data retreats added to the rigour. |
was comprised of experienced researchers from a variety of backgrounds. As others have found, our social scientists offered ongoing insights into areas that, despite the new models of care, may have been too familiar to our clinician researchers.36 The team needed to develop a consistent approach to data collection and management, while maximizing the potential provided by the diverse backgrounds of our study team.

We spent considerable time preparing the research team for the primary care environment. Each ethnographer participated in a structured training program with modules relating to the history and philosophy of primary care in general, and the process of primary care reform in Ontario. Practical activities were included in the training to introduce the ethnographers to non-participant observation in the primary care setting. We used resident family physician training videotapes of primary care encounters and conducted observation in the principal investigator’s family practice clinic. In addition, the ULTRA tool50 and the provider observation processes were piloted during a quality assurance exercise conducted within an academic family practice clinic.

Weekly team meetings throughout the study allowed ethnographers to discuss data collection experiences, compare methods for recording field notes and observing routines and clarified methodological uncertainties, explore emerging themes and discuss approaches to analysis. In addition, the team met with two external consultants for three intensive data analysis retreats that provided the team with expert feedback, critical assessment of our research, the opportunity to explore implications of the findings and identify academic dissemination opportunities.

Our investments in the team helped ameliorate the effect of researcher turnover. During the course of this 2-year study, two of the ethnographers left their positions and were replaced with ethnographers who had previously worked with the project in other capacities and therefore were familiar with the study. Despite their connection to the study, we lost some of the implicit knowledge they had of the FHTs. However, the use of the ULTRA tool, regular meetings and periodic case study preparation helped preserve the integrity of this data.

Discussion

Our need to capture the complexity of routine change within primary care practices required in-depth qualitative methods. One-on-one interviews are one of the most commonly used qualitative research method. While interviews are helpful for exploring an individual’s subjective perceptions, they are limited in capturing what is happening in the wider context or in establishing the critically important relationship among the parts and rely on the notion that someone is consciously aware of all that they do. Both dimensions are fundamental for understanding and hence effecting change in primary care practice.18 To overcome the limitations of interview-only research methods, we conducted an ethnography of FHTs.

Our experiences in the implementation of this study highlight some potential benefits of and the difficulties inherent in implementing an ethnographic study in family practice. Our study design gave us an opportunity to highlight the changes in routines within an organization in transition. However, with such a complex and inherently unpredictable methodology, there are bound to be challenges. The key messages and potential solutions (see Table 2) outlined here will help other primary care researchers who are interested in applying similar methodologies in other contexts.

Despite some of the difficulties, the potential richness of this data provides an opportunity to explore a number of additional research questions that emerged during data analysis. Our ability to negotiate the challenges of the study required overcoming setbacks in the field, which was enabled by the assembling and further development of a diverse and skilled research team. A study with a clinical perspective requires training and support, a mixture of backgrounds and perspectives and ongoing rich communication.

This study design allowed us to conduct in-depth research, which provided a nuanced perspective on chronic disease management in FHTs. Direct observation—a distinctive feature of ethnography—also led to the exploration of organizational changes in a way that could not have been possible by relying solely on in-depth interviews and document analysis. The results of this study will be published elsewhere, here we have unpacked some of the mystery that remains about conducting ethnography in primary care settings and that others undertake similar studies so that these complex methods become increasingly better adapted for clinical settings.

Supplementary material

Supplementary material is available at Family Practice online.

Acknowledgements

We would like to acknowledge the contributions of Wendy Martin, BA, MA, PhD who contributed to recruitment, data collection and early data analysis.

Declaration

Funding: Ministry of Health and Long-Term Care in Ontario, Canada.

Ethical approval: Ottawa Hospital Research Ethics Board.

Conflict of interest: none.
References