Applying ethnography to the study of context in healthcare quality and safety

Abstract

Background: Translating and scaling healthcare Quality Improvement (QI) and Patient Safety interventions remains a significant challenge. Context has been identified as a major factor in this. QI and patient safety research have begun to focus on context, with ethnography seen as a promising methodology for understanding the professional, organizational, and cultural aspects of context. While ethnography is currently used to investigate the context of a variety of QI and safety interventions, the challenges inherent in effectively importing a qualitative methodology and its social science practitioners into this work have been largely unexamined.

Discussion: We explain ethnography as a research practice grounded in theory and dependent on observations gathered and interpreted in particular ways. We then review the health services literature's approach to evaluating this sort of qualitative research. Although the study of context is an interest shared by both social scientists and healthcare QI and safety researchers, we identify three key points at which those 'exporting' ethnography as a methodology, and those 'importing' it to address QI and safety challenges may diverge. We describe perspectival divergences on the methodology's mission, form, and scale. At the level of mission we demonstrate how ethnography has been adapted to a 'describe and feed back' role in the service of QI. At the level of form, we show how the long term embedded observation at the heart of ethnography can be adapted only so far to accommodate QI interests if both data quality and ethical standards are to be upheld. Finally, at the level of scale, we demonstrate one ethnographic study design that balances breadth of exposure with depth of experience in its observations, and so generates a particular type of scalable findings.

Summary: The effective export of ethnography into QI and safety research requires discussion and negotiation between social scientific and health services research perspectives, as well as creative approaches to producing self-reflexive data that will allow clinicians to understand their own context and so improve their own processes.

Introduction

Despite a supply of good ideas and local successes, 'many quality improvement (QI) projects often fail to reach their goals.'[1] Faced with the challenge of translating and scaling QI and safety interventions the field has turned towards a study of context as a mitigating factor in the uptake of evidence-based findings at clinical and organizational levels.[2] This is part of a broader acknowledgement that exclusively protocol-based interventions,[3,4] and interventions without robustly theorized mechanisms for success which include attention to context, are likely to fail.[5,6] As understandings of context have improved, the literature has moved from defining it as everything but the quality improvement intervention itself,[7,8] to more nuanced theories and empirical work in which professional, organizational, cultural, and structural factors are seen as contextual influences on how quality and safety interventions are put into practice.[9-11]

Ethnography as practiced in the social sciences shares this theory driven approach to understanding how these contextual factors shape action.[12] Longstanding social scientific interests in how professionalism[13-16] and organizational factors[17-20] influence human behaviour suggest a synergy between ethnographers and healthcare QI and safety researchers. After repeated calls for this synergy to be built into practice [21,22], ethnography has been used to understand the contexts surrounding a range of healthcare QI and safety topics. These include: adverse event reporting;[23] intravenous medication errors;[24] healthcare information technology platforms;[25] continuous quality improvement programmes;[26] ethical behaviour amongst clinicians;[27] pre-operative checklists and operating room errors;[28-30] the practical application of abstract teamwork principles; [31] distributed team dynamics;[32] the generation of nosocomial infection data; [10] and the translation of large scale QI interventions into new locations.[33]

Although ethnography has established itself as a powerful method for understanding healthcare context, as it has travelled from the social sciences into QI a number of key challenges to producing high-quality analyses have emerged. This paper takes up these challenges. It shows that assumptions made by ethnography's social scientist exporters and healthcare QI importers about the methodology's mission, form, and scale are not necessarily in synch with one another. It offers practical solutions for improving the degree of match between the two perspectives and more effectively integrating ethnography into QI and safety efforts.

Ethnography: An Overview

Ethnography involves direct observation of people's behaviour and their social environments. It is carried out over a sustained period of time, with a technically and theoretically trained ethnographer:

- observing context through written, audio or video recordings,
- performing more or less structured interviews, and
- analyzing the use of artefacts such as documents and equipment.[34]

The ethnographer's goal in collecting these data is to develop a nuanced understanding of the social relationships and technical activities of interest in a study. It proceeds from the assumption that people create their own realities in the course of interacting with one another and their environment. This social constructivist approach to the facts ethnographers observe emphasizes the role of theory and interpretation in the scientific process to an extent that is absent from most quantitative research. Indeed, the development of a theoretically informed reading of the social, artefactual and technical phenomena under observation is the central task of contemporary 'interpretive' ethnography.[35]

To accomplish this, ethnographers generate a 'thick description' of the people and environments they observe.[12] Such a thick description does more than record surface appearances:[36] it interprets 'how [people] shape and trim their actions to fit their principles,' and vice versa.[37] As Schwandt notes, 'it is this interpretive characteristic of description rather than detail *per se* that makes it thick.'[38] Indeed, focusing on the mere accrual of detail risks turning ethnography into 'a laundry list of features and considerations.'[39] As much as amassing a great volume of detail may be part of the sometimes 'boring' work of ethnography,[40] this is not a central focus as it might be in a more Taylorist research

program engaged in watching and counting instances or time segments. Rather, ethnography focuses on using social scientific theory to sift through and interpret out the most relevant and telling details.

These interpretations present a mirror image of the cultural context, relationships, and technical activities under observation. It has been argued, however, that 'invariably, the mirror distorts' and the reflection may not be the observed subjects' own, but rather one shaped by the ethnographer's interpretation.[41] In this sense, ethnography is 'highly dependent on the individual researcher's subjectivity, sensitivity, and interpersonal skills,'[42] with his or her theoretical grounding, professional, and biographical experience shaping how the thick descriptive material is gathered, and the 'mirror image' interpretation of that material developed.[43-45]

Evaluating ethnography in QI and safety

To address its inherent subjectivity, ethnography 'has become more self-reflexive in recent years,' substituting transparency of method for objectivity in observation.[46] Transparency here is an adherence to, and presentation of, methodological detail and research best practices. Following the more positivist approaches championed in an ongoing debate within traditional ethnography,[47,48] transparent, high quality ethnographic work in the service of health care:

- thinks about and presents its authors' social biases to readers;
- clearly describes its methods of sampling, data collection, analysis and the theories underpinning the authors' interpretive thick description;
- adequately triangulates data sources (such as observations, interviews, and documents);
- seeks out a wide range of perspectives when collecting data;
- is attentive to cases that form exceptions to the authors' interpretation;
- demonstrates its relevance to problems identified in the literature; and validates its interpretations by checking with those who have been observed.[34,49-52]

A recent review of ICU ethnographies suggests that much of the research being done does not meet these criteria.[53] To produce higher quality data, ethnographers seeking to contribute to QI must be transparent in how their 'mirror image' interpretation has been generated, and must point out the most likely ways this image of context might be distorted. In addition to adhering to these principles, we suggest, higher quality ethnographic accounts of context also require attention to key differences in how the methodology's exporters (social scientists) and its importers (QI researchers) approach three of its core elements (See Box 1).

Dimension	Traditional Ethnography	Quality and Safety Research
Mission	'describe and critique' distribution of power, social relations	'describe and feed back' perspectives for clinical improvement
Form	Long-term exposure	Near-term action
Scale	Deep, nuanced account of single site	Broad, scalable accounts of multiple sites

Box 1: Three Key Differences between traditional ethnography and QI priorities

Ethnography's Mission

Social science ethnographers generally, and medical ethnographers specifically, have often viewed their work as an opportunity to critique the present arrangement of social relations, revealing inequalities.[22] Inherent in much of the theorization that underpins their work is a search for how power is distributed and exercised in society.[54,55] The end goal of their work is to understand and offer plausible explanations for the way contextual elements like culture, professions, and organizations are arranged. This 'describe and critique' model stands in contrast to the more utilitarian approach of evaluative and applied health services research. In many cases this has led to contextual descriptions ***of*** clinical practices, which are not necessarily intended ***for*** clinicians' use or quality improvement purposes. In this way ethnographic data from clinical settings have been used to illuminate the present state of social relationships and power, but not necessarily to re-engineer social and cultural context to optimize quality and safety.

Recently, there have been suggestions that the traditional mission to 'describe and critique' be modified to one of 'describe and feed back.' Concurrent evaluative fieldwork – in the form of ethnographers feeding their descriptions back into the quality and safety process – has been proposed as a way to improve intervention success.[5] Re-tasking ethnographers to produce output that serves quality and safety interests– shifting them from contextual analyses ***of*** health services to analyses of context ***for*** health services professionals – is, importantly, a shift in mission from one of distant critique to one of engaged service.[56,57] It is a shift from using narrative accounts not just to describe action, but to engage in 'action research' where thick description is focused on change.[58,59]

A key element of this shift in ethnography's mission is that it shapes the practices and perspectives of *both* exporting social scientists and importing QI researchers. As ethnography is imported into the QI field, its adapted 'describe and feed back' mission provides that same field with a self-reflexive resource for better understanding its own context. Kitto and colleagues argue this increased self-awareness will offer QI greater freedom to grapple with the complexity inherent in translating and scaling interventions.[60] Early efforts at acknowledging the specific norms and knowledge forms that shape the QI field itself have proved promising.[61] Given that complexity and nuance are what ethnography excels at revealing, QI importers will need to brace themselves for a stream of complicating and confounding – rather than easy and transparent – findings on how clinicians and healthcare organizations interpret and operationalize policies, programs, protocols and checklists aimed at improvement. There is rarely a single culprit or barrier in an ethnographic account but rather a complex interaction of contextual factors. Transparent discussions of both ethnography's strengths and adaptations as well as implementation science's own contextual limitations will need to continue if the exported method is to retain a critical vigour in its new environment.

Finally, although the traditional commitment to 'describe and critique' has been challenged as stultifying[62] it is important to note that it is based in a certain pragmatism. Ethnographers have learned that, to have their work accepted by the widest possible audience, analysis ought to flow from a critically distant and dis-interested position, rather than that of an interested agent of change.[60]

Sociologists are well aware of the challenges to their authority that are associated with moving from being 'interpreters' to 'legislators' of change.[63] As Bosk points out, 'all ethnographers know that the accounts of the partisans in action are accepted with great skepticism.'[46] Taking up a 'describe and feed back' approach requires an acknowledgement of the possible loss of authority inherent in such a mission choice, and concrete design strategies to counter that possibility. Rather than giving up critique entirely, exported ethnography needs to work with its QI importers to negotiate a place for the self-reflexive challenge of power relations in both clinical and QI research environments.

Ethnography's Form

A second point of mismatch between ethnography and quality and safety can be found at the level of form. Ethnographers tend to prefer long-term observation over short-term action. This preference has normative, technical, and financial implications, each of which interact with the QI and safety agenda. An ethnographer's training informs her that *good work* is, 'predicated on sustained time in the field and taking time to build trust relationships with participants.'[44] This is a commitment that is at once normative and technical, with ethnographers relying on long-term, trusting relationships to provide them with nuanced rather than surface and self-conscious contextual data. Sustained observation is, in this sense, a check against reactivity, or the so-called Hawthorne Effect in which subjects are assumed to alter their behaviour in response to being observed.[64,65]

As part of re-tasking ethnography to address the problem of context in QI and safety, some health service ethnographers are acknowledging that a flexible and pluralistic approach to research forms is required.[44,66] While there will always be a place for the long-term embedded ethnographer, ethnography conducted over shorter periods of time has been shown to produce data that are highly relevant to QI and safety agendas.[10,44] Similarly 'video-reflexive ethnography' in which time delimited interactions are filmed and co-analyzed by ethnographers and subjects has informed the development and implementation of interventions to improve handovers.[67,68] Even with these advances considered, the way trust-building embeddedness and production-oriented efficiency ought to be balanced when importing ethnography into quality and safety research, remains an open question. At stake are not just ethnographers' professional ethics and traditional mission of challenging power relations, but the quality and so authority of the data that are gathered.

Ethnography's Scale

Traditional ethnography aims to produce an in-depth account of the social context at a single site. As such it has been decried as 'useful for describing social process in very specific circumstances but not for generalizing across settings.'[42] Health services ethnographers have used theoretical and technical tools to overcome this handicap and so 'scale-up' their findings. As an example, the ethnographic observations of a specific group of surgical residents responding to a particular regulatory intervention to improve quality and safety can be linked to a broader research literature on change in organizations.[41] Another, more technical approach to scaling up health services ethnography adopts a multi-site approach. Rather than one or two sites covered by a single ethnographer, this approach to studying context multiplies both field sites and the number of fieldworkers. In this way what might have been an ethnography of a specific ICU responding to a particular quality and safety intervention becomes a comparative study of 19 ICUs interpreting and implementing a national directive.[10] Dixon-

Woods and colleagues' move to scale ethnography up in this manner was, to our knowledge, the first instance of such an effort directed at examining QI and safety in the health services research literature. While pioneering, their alterations to ethnography's traditional scale raise important questions about how multi-site fieldwork ought to balance breadth of exposure with depth of experience. As these questions are debated and research teams adopt their own balances it is worth recalling that conducting ethnography on a grand scale is not necessarily the only or best solution. Just as thick description is not the pursuit of detail for detail's sake, so ethnography in the service of QI is not simply about 'scaling up.' A small scale, but high quality ethnography asking the sort of complex, nuanced questions the methodology excels at is a powerful way to gather actionable data that survey instruments can struggle to achieve.

Discussion

Based on sustained, systematic, and theoretically informed observations, ethnography produces an account of professional, organizational, cultural and structural factors. Although it is an inherently subjective methodology, criteria for evaluating the quality of ethnographic work – and so the fidelity of the descriptions it generates of context influencing action – are widely agreed on. In addition to following these best practices, the effective integration of ethnography into QI, involves negotiating operational definitions of the methodology's mission, form, and scale that are consistent with high quality work, and the goals and values of those undertaking the research. Our own emergent experience of multi-site ethnography in support of QI in ICUs has seen us discuss adaptations across these three dimensions. We share these here in an effort to encourage further dialogue on these key points between social scientific exporters and QI importers.

Our core research team presently includes two social scientist leaders and two social science trained ethnographic field workers. This team is presently conducting a comparative ethnography of ICUs in four hospitals in locations throughout the US. Funded by the Gordon and Betty Moore Foundation, the project seeks to describe the nature of interprofessional collaboration and family involvement in care, and to develop a diagnostic tool that will feed these ethnographic data back into ICUs which have an interest in improving their practice in these domains. As such we are committed to the 'describe and feed back' rather than 'describe and critique' approach to the methodology's mission.

Mission

Despite this commitment, QI and patient safety research tends to take place in rapid-improvement cycle environments with funders, hospital executives, researchers, and clinicians strongly focused on producing demonstrable results in relatively short periods of time. Disseminated as tools, checklists, and protocols, this approach has yielded many helpful fixes, although their transferability and scalability remain stubborn problems. As the study of context, ethnography is a time consuming process that produces incremental insight that is suited to stimulating local introspection rather than the development of a generally applicable checklist. Negotiating at this point of mismatch, we have entered into conversation with the Moore Foundation and our advisory group of healthcare QI and ethnography experts. As part of negotiating the contextual challenges presented by the QI environment itself to ethnographic processes, we have begun developing a diagnostic tool that encourages ICUs to take a self-reflexive approach to identifying interprofessional collaboration and family involvement issues in their

practice. Each conversation between ethnography's QI importers and its social scientific exporters will, we suggest, require similar negotiations in which the 'describe and feed back' mission is tailored to the methodology's strengths.

Form

At the level of form, we are negotiating a new approach to gathering ethnographic descriptions at the point where our unit of analysis – the ICU – meets our interest in patient and family involvement. In its design, our ethnography is ***of***, and ***for***, the ICU clinicians we are observing, with our ethnographers embedded in ICUs and their context. At the same time we have taken up the challenge of improving understandings of families and their experiences as potential contributors to care. We are confident, after our first 600 hours in the field, that we are gathering high quality data of the ICUs and their processes. However, similar levels of exposure, familiarity and trust have proved technically and ethically challenging to attain with patients and families who traverse ICUs more or less rapidly and in various stages of illness and crisis. Again, in discussion with our QI partners we are developing study design adaptations at the level of form that will supplement the rich descriptions of patients and families we have gained through the eyes of the ICU clinicians. Our hope is to leverage our long-term relationships with the ICUs and their staff to attain as great an exposure to families as is possible and ethically appropriate. Similar conversations negotiating multiple QI priorities and the design of an ethnographic study to answer specific questions about context, will remain important.

Scale

At the level of scale, our project's comparative ethnography of 4 ICUs seeks to balance the rapid, broad exposure design of Dixon-Woods and colleagues[10] with a more traditional ethnographic approach to depth and nuance of experience. Our intent in striking this new balance, and in designing a project specific data management framework that will bring our two ethnographers' comparative observations into alignment for analysis and coding, is to create a space where local ICU differences, as well as differences in ethnographic style, are accommodated. This data management framework has been designed to facilitate analysis, and perhaps even more importantly, to give rise to scalable 'describe and feed back' output. To this end, our emergent efforts to draw general lessons from the specifics of our observations have focused on identifying 'sensitizing vignettes' in developing our diagnostic tool. We are building these vignettes out of the full comparative data set, selecting them in ways designed to facilitate local, rapid, QI oriented self-analysis. Our intention here is to have ICUs use the vignettes to start QI conversations at the local level, thus achieving the levels of buy in and ownership that have been shown to be important in achieving change.[69] This effort to feed ethnographic findings back into the ICU community is not only aligned with the QI mission, but reflects trends in the literature towards self-reflexivity as a method for identifying local strengths and solutions.[67,70,71] This innovative approach to bringing ethnographic data to bear on the contextual challenges presented to QI is the result of dialogue between the importing field and exporting social scientists. These conversations about how to scale ethnography for optimal effect are essential to ensuring the highest quality versions of the methodology make lasting contributions to healthcare QI.

Conclusion

The effective integration of ethnography into the QI and safety agenda requires that it be actively designed into context research. These active discussions about the methodology's mission, form, and scale need to focus on the innovations and trade-offs involved in its importation. Ethnography will produce the highest quality insights when the perspectives of both its QI importers and social science exporters are taken into consideration. The effective uptake of its findings also requires that both sides embrace it's inherently self-reflexive approach not just to a particular research question, but even the QI and safety environment in which it is being used. This openness to self-analysis will lead to: better understandings of the complexity of the challenge context poses to QI; improved research questions guiding ethnographic fieldwork; and creative approaches to using ethnographic data to allow healthcare clinicians to understand their own context and so improve their own processes.

Competing Interests

None of the authors declare any competing financial or non-financial interests.

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