Trust, Ethics and Access: Challenges in studying the work of Multidisciplinary Medical Teams

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Abstract—This paper highlights the challenges for researchers when undertaking research on multidisciplinary medical teams (MDTs) in real-world healthcare settings, and suggests ways in which these challenges may be addressed.

Keywords—ethnography; real world research; healthcare;

I. INTRODUCTION

Over recent years we have witnessed a growing interest in research on medical teamwork: the practices, decisions and questions on benefit to patient outcomes, among other topics. There is also a growing awareness of the need to conduct research to the highest standards, and to demonstrate adherence to ethical principles. Attitudes towards monitoring student research projects, even if small projects, have changed. Instead of supervisors being responsible for ensuring ethical standards in research, university departments typically have established formal committees to ensure that any proposed topic and methodology meet accepted good practice.

Table I lists the main ethical principles in research. There is a long tradition in medical faculties of formally monitoring that ethical standards are adhered to in research. For computer scientists and informaticians, this is a more recent development. Much research in computer science is laboratory based, and a simple consent form from a research participant (likely a fellow student) is often all that is required when recruiting participants for experiments. For real-world research the process is more stringent, because of concern that the research might interfere in the business process. It is our experience, that when one is embarking on an applied research project in a hospital or healthcare setting, both the university and the healthcare provider must approve it, which typically results in a very strict process, even if no patients are involved.

Here we describe our experience in being approved to undertake research with multidisciplinary medical teams and their use of technology. The formal application is one aspect; there are other hurdles to overcome, and relationships to be established, to enable our research to be carried out.

Our research context is a large tertiary referral teaching hospital. We proposed to work with a team with which one of us was well known. The topic was the use of technology in teamwork, and we proposed an ethnomethodologically-informed ethnographic study. It is a hospital requirement that applications to conduct research are only accepted from clinical consultant staff. In granting approval, the hospital ethics committee noted that our study had no interest in any individual patient data, and that our research concerned work methods, protocols and the design of computer support to make work processes more effective. Undertakings were given that the privacy of any patient information that we encountered would be respected with strictest confidentiality. We also undertook to report regularly to our consultant research mentor and to conduct our research in strict adherence to St. James’s hospital policy [1] and legislation. The university department ethics committee was formed after the hospital had given their approval, and the university permission was given retrospectively. If we were proposing our study today, we would have two independent ethical processes to navigate. When two committees are involved, each often requests the decision of the other before granting permission, which can cause undue delays in starting research projects.

II. RESEARCH METHODOLOGY

Our approach is an ethnomethodologically-informed ethnography. We utilise a number of complimentary methodologies to reduce the limitations and biases of any of the individual methods. A useful approach to research on multidisciplinary teams (MDTs) is that adopted in Computer Supported Co-operative Work (CSCW) which is concerned with the need to support multiple people working together using computer systems [2]. We draw upon CSCW approaches to analysing work and articulating ways in which team members collaborate.

We combine an ethnomethodologically-informed ethnographical approach of [2], [3] to video-based interaction analysis [4] in the context of the tasks and content-free dialogue analysis [5], with a focus on case discussion
structure [6]. Understanding work and organisation “from the inside” provides insights into the organisational situatedness of the work, the methods and practices through which work activities and interactions are assembled, and is useful in the design of technology to support it [3]. We investigated the temporal organisation of activities, at macro and micro levels, through unobtrusive observation. Over a 3 year period the following data were gathered: Almost 1000 observation of work practices that included observations at remote sites in video conference and in other jurisdictions. Three questionnaires, an exercise in information gathering, real time evaluations, over 70 interviews and over 35 hours of audio-visual recordings were also used for analysis and verification of findings. Analysing the MDT to elicit system requirements to inform the design of technological support is not straightforward, and no single method is readily available. Following the approach of [2] to focus on the nature of the work, and the information flow rather than the interactions per se, a number of tools and perspectives were drawn upon to understand the tasks and the difficulties experienced by staff in conducting their work. Observing the Hippocratic Oath to ‘do no harm to anyone’, i.e. to work in the patient’s best interest, is embedded in our approach [7].

1) Unobtrusive Observation: How team members conduct their tasks and interact provides evidence of the information flows during an activity, and helps understand the task and difficulties in the work [8]. Ideas from [4] were useful, particularly in identifying internal structures of patient case discussions [6], [9]. MDT work is conducted through ‘talk’ and artefacts and technology mediate among the team members, so the use of conversation analysis tools is considered appropriate [2] in conjunction with detailed description of the cognitive activities during discussion.

2) Video analysis: verified observation and allowed for content-free analysis of the team talk. Content-free analysis of turn-taking [5] allowed annotation of individual turn-taking in speech contributions, and to measure the effect of teleconferencing on case discussions [10].

3) Questionnaires: Distributing questionnaires, completed in private, elicited a self-assessment of the value of the discussion among the different specialists.

4) A Specially designed Exercise: directed at observers, who attend for educational purposes, is reported in [11].

5) Interviews: Structured, semi-structured interviews, evaluation exercises and questionnaires were informative and served as opportunities to interact with MDT members and, through interaction, build rapport and develop trust.

6) Artefacts: Policy documents, hospital (organisational) records and artefacts were reviewed throughout the study.

A. The Importance of Trust

Trust and confidence of the participants must be established at the outset. Following standard ethnographic practices BK was accepted as an observer within the team.

B. Medico-Legal considerations

Medico-legal and confidentiality concerns regarding video recording were overcome by undertaking that the video would only be used for this study, and would be destroyed once the annotation data were collected. No individual patient data were collected in this research. Quotations or examples of clinical cases reported were generic.

III. Conclusion

Conducting research in a complex work setting such as an MDT requires special attention. Building trust at the outset is critical. Adherence to good research practice and ethical principles is essential. The importance of maintaining confidentiality of the content of the talk among clinical staff is important, to maintain trust of the MDT and observe confidentiality requirements. Several approaches to data collection should be employed to triangulate and validate findings. The importance of engaging with clinical staff and building trust with researchers cannot be underestimated. It is through high quality work, respected by peers and clinicians, that integrity in research can be demonstrated.

REFERENCES