

## CLIST critical appraisal workshop 18 November 2010

Lewis PJ, & Tully MP (2009) Uncomfortable prescribing decisions in hospitals: the impact of teamwork. *Journal of the Royal Society of Medicine*, vol. 102, no. 11, pp. 481-8.

The article was discussed by CLIST using the Critical Appraisal Skills Programme (CASP) tool, *10 questions to help you make sense of qualitative research*, available at <http://www.sph.nhs.uk/sph-files/Qualitative%20Appraisal%20Tool.pdf> and © Public Health Resource Unit, England (2006). Notes are by Natasha Davies, NHS Havering.

### Screening Questions

#### 1. Was there a clear statement of the aims of the research?

YES. In the objectives section of the abstract the authors state their goals as:

*“This study investigated the effect that team interaction and structure had upon UK hospital doctors' prescribing decisions, particularly their discomfort felt prescribing.”*

It was noted that the order of this wording differs from that of the article title. There was also some discussion about the focus of the research. This article only covers part of the research findings. The authors identified 193 critical incidents of which only 1/3 were related to team work. Incidents relating to evidence based medicine (EBM) are dealt with separately. There was a question as to whether it is appropriate to focus on the issue of team work when other issues are related.

The authors establish the importance and relevance of the article in the introduction by suggesting that the effect of the team on doctors' prescribing has not yet been explored. Later in the Discussion section of the paper they discuss implications for patient safety.

The paper is engaging. It would be good for journal clubs / critical appraisal sessions.

#### 2. Is a qualitative methodology appropriate?

YES. This is an exploratory paper and the issues it brings out would be difficult to quantify. Once “*social*” factors are mentioned (in the abstract) a qualitative study is indicated. The authors used a grounded theory approach, in which the theory is developed from the interview data rather than being preconceived.

The authors stated that “*a systematic approach to analysis of the data was aided by use of the qualitative data analysis package, NVivo*”. It was suggested that there could have been more information on this package and how it works, but although it would be useful it would be unusual for a research paper to provide this kind of detail.

**Is it worth continuing?** YES

## Detailed questions

### 3. Was the research design appropriate to address the aims of the research?

Use of the Critical Incident Technique (CIT) is justified because it collects a record of behaviour rather than opinions. Participants are asked to reflect on a real life incident before a 1-2-1 interview session.

Disadvantages of CIT are that details may be forgotten or omitted if they reflect badly on the participant. Asking participants to think about "*uncomfortable prescribing decisions*" might emphasise the negative before the session even starts.

However, it is difficult to see how else the authors could have carried out the study. There was some consideration of other options including scenarios (idealised and unrealistic), focus groups (interesting, but probably inappropriate). An anonymous questionnaire could have been used to identify themes that were then used to inform the interviews.

A question was raised about what happened to the data from the second part of the interviews.

### 4. Was the recruitment strategy appropriate to the aims of the research?

The authors state that:

*"Snowballing was used to improve the recruitment of junior doctors by requesting participants to suggest peers who may be willing to take part. Thirty-two doctors were selected for interview based on an initial purposive sampling frame, which sought doctors of varying experience working within different specialties; a further 16 doctors were theoretically sampled according to emerging findings."*

It was suggested that more information could have been given, for example the numbers of senior / junior doctors and that the information given is somewhat confusing. There is no information about how or why the extra 16 doctors were recruited, for example, if this was to make up shortfalls in numbers of doctors of particular grades / specialties.

"Snowballing" is used to target hard to reach groups. There is no mention of drop out rates. Perhaps this strategy ensures selection of participants who are most likely to participate.

Qualitative research usually continues until they point of data saturation, when the researcher is no longer hearing or seeing new information. The authors do not mention saturation or why they stopped after interviewing 48 doctors. It was noted that 48 is a large sample size for qualitative research. It would have been useful to have a table showing the breakdown of doctors by grade and perhaps gender. This information would be important because the article is about teamwork and relationships but it would need to be done in a way that did not compromise confidentiality.

There was some discussion about why the authors focused on this particular professional group, presumably because all doctors can prescribe whereas there are only a few nurse prescribers. It was suggested that the article would need to be about doctors to be published in the Journal of the Royal Society of Medicine. (looking at JRSM contents lists

I'm not sure if I would agree – also we don't know if this was the first journal they tried. They may have been rejected by, for example, Social Science and Medicine RP).

It was noted that the article was written by two pharmacists. We discussed whether this might be a possible source of bias. For example, the authors suggest that pharmacists should be more involved in prescribing decisions.

However, as the article is looking at the multidisciplinary team (MDT) it might have been appropriate to interview some nurses and do some comparisons to help validate the research. The issues related to nurses were themes that emerged from the interview data. These might be researched in more detail in the future.

The authors state that they sent invitation letters to “*all doctors in the hospitals*” and it would have been interesting to know how many they wrote to and how many responded and if they had a pool from which to sample. It was suggested that senior doctors might have been more likely to respond. The authors state that selection was based on a “*purposive sampling frame, which sought doctors of varying experience working within different specialties*”. -- Qualitative research does not require a representative sample so we might describe this as mixed methodology.

There were 193 critical incidents reported but only 48 doctors were interviewed and there was a question as to how those numbers worked out. Did the 48 doctors have several critical incidents each, or were other doctors who reported critical incidents not interviewed?

Triangulation is a method used by qualitative researchers to check and establish validity in their studies. That a further 16 doctors were theoretically sampled according to the emerging findings would have allowed the authors to compare with the original participants, corroborate their earlier findings and explore other aspects. The authors do not mention triangulation explicitly. Triangulation could have been done by talking to nurses and pharmacists and respondent validation by discussing the findings with the doctors they interviewed.

## **5. Were the data collected in a way that addressed the research issue?**

The authors don't mention the interview setting (this should be a neutral space where participants feel comfortable) or specify whether they were face-to-face or telephone interviews. They state that the interviews “*allowed doctors to discuss their subconscious thought processes*”, without specifying how this was made possible. It was suggested that the authors might have felt they didn't need to include these details because they have stated that they are using the CIT methodology and have referenced it.

As mentioned under question 4, qualitative research usually continues until the point of data saturation. The authors do not mention data saturation explicitly but it was possible that this was the reason for recruiting the “*further 16 doctors*”.

## **6. Has the relationship between researcher and participants been adequately considered?**

It is stated that “*all authors individually read the critical incidents*”, but there are only two authors! A third person is acknowledged by the authors as having a role in the design and analysis of the paper – maybe they should have also been listed as an author. There are

details of each author's contributorship and acknowledgement of another individual's contribution to discussions on design and analysis of the study.

Qualitative researchers may employ bracketing to ensure that previous experiences and preconceptions don't influence analysis of the data. There is no mention of bracketing, disassociation or reflection / reflective diaries in this article.

Further, it is not made explicit if the authors are academic pharmacists or practising hospital pharmacists. We speculated whether this might make a difference to the attitudes of the doctors interviewed.

## **7. Have ethical issues been taken into consideration?**

The authors state that "*approval from an NHS Research Ethics Committee and management approval was obtained for the study. All data were treated as strictly confidential.*"

However, the article state where the study took place and so some of the quotations could place participants in specific trusts / hospitals / departments. There was some discussion about the utility of knowing the participant's specialty, especially given that there are only 1 or 2 comments per department / specialty. This might have been done to show how widespread the problem is. Confidentiality could have been increased by omitting this information.

It was noted that this relates to the importance of describing the interview setting (see question 5). If the interviews took place on trust property and the trust / department knew where the interview venue was, other staff would know which doctors had participated.

(It was not part of our discussions but when I discussed this paper with a senior nurse colleague at my Trust which illustrates the different perspectives people might have on this paper. She felt the authors faced a moral imperative to report what she considered to be unsafe practice. RP)

## **8. Was the data analysis sufficiently rigorous?**

Although the authors employed "*a systematic approach to analysis*" they do not detail exactly what that approach consisted of and discussion of the data analysis is brief. **This** makes it hard to appraise the analysis but does not mean that the analysis has not been done or was done inadequately. There is no mention of the grounded theory approach outlined in the abstract. It is possible that, given restrictions on word count / length, the authors chose to put more content into the discussion section.

The authors state that "*Direct comparison with earlier data was conducted and examples were sought where prior findings were disconfirmed and contrasted.*" There was a question as to whether this was where the theoretical sampling came in.

The article includes 17 verbatim quotations. Of the 48 participants only (perhaps) 11 participants have been quoted; some participants have been quoted twice. The views of the other 37 participants are not expressed. The quotations are used to support the emerging themes. There was a question as to whether some sort of bias was in operation because there is only one example of contradictory data (in relation to the hierarchical

team not always being a source of discomfort). The authors choose to interpret this in a negative way:

*“The hierarchal team was not always a source of discomfort. Juniors would also approach a more senior doctor for advice when faced with a difficult prescribing decision. Some junior doctors felt that by gaining such advice, they would be absolved of responsibility, and essentially could ‘pass the buck’.”*

We are unclear if this “pass the buck” is a phrase use by one of the participants or one chosen by the authors. It he later it is not objective and should not appear in the results section.

## **9. Is there a clear statement of findings?**

There is a frustrating lack of EBM. The article repeatedly mentions “*prescribing norms*” and there was a question as to whether there are not local guidelines in place. It was noted that guidelines represent an ideal and that consultants will usually do their own thing.

The focus of the findings, as reported in this article, is on the teamwork. This article completely ignores data relating to EBM and the doctor–patient relationship. There was a question as to how a legitimate conclusion can still be reached when so much evidence is omitted.

That 1/3 of the critical incidents were related to team work and 2/3 were not may explain the number of quotations and participants who were quoted as mentioned under question 8. Other participants might not have mentioned teamwork as a factor in their critical incidents.

It appears that the authors have chosen to write this less complete article on findings relating to teamwork, in order to get two articles out of the same piece of work. This could simply be a practical decision that was deemed necessary to enable the authors to get this short article published in Journal of the Royal Society of Medicine. A longer article detailing all of the research findings may not have been accepted for publication. The authors could have usefully included signposts to other articles on this research, so readers could see all of the findings in context.

Respondent validation was not used.

The discussion covers the authors’ findings and brings out links to other literature.

The recommendation of a flattened hierarchy may be ambitious. The authors also seem to be advocating an increased role for pharmacists. It was noted that they could have mentioned librarians and information professionals and their role in signposting doctors to guidelines and other sources of information.

The section in the results that looked at the influence of non-medical professionals in fact concentrates wholly on nurses. We do not know if other professions were discussed.

There are some negative statements made about nurses, such as “*negative emotive discourse*” and “*expert power*” but they do not have the right of reply. There may well be justifications for their actions, for example, nurses are experts in their own specialty but junior doctors are only there for 4-6 months.

## **10. How valuable is the research?**

It was agreed that this was had some value piece of work and went some way towards plugging a gap in the evidence base.

The authors' recommendations are ambitious but they have to be when addressing big issues. Uncomfortable prescribing decisions are evidently being made every day. Clinicians who read this article will reflect on their own experiences and that may lead to change. For a complete picture, however, they would also need to refer to the other paper generated by this research on EBM and prescribing.

The research was carried out in a specific setting and so the conclusions may not transfer to other areas.