

Author's response to reviews

Title: Community nursing needs more silver surfers: a questionnaire survey of primary care nurses' use of information technology (IT).

Authors:

Tom Chan (tom.chan@shb-tr.nhs.uk)
Sarah Brew (sarah.brew@gp-H82047.nhs.uk)
Simon de Lusignan (slusigna@sghms.ac.uk)

Version: 2 Date: 15 September 2004

Author's response to reviews:

Dear Editor,

Our responses to the reviewers' comments are set out below. Thank-you for the feedback on the paper.

Simon de Lusignan (on behalf of the authors.)

Response to the reviewers' comments:

A: Christine Urquhart

1. Questionnaire should be included in the paper, as web pages change, and it is not possible to work out from the tables and text what the questions were. [Minor essential]

The questionnaire has been uploaded as an additional file.

2. 'Ethical approval was obtained from the local medical ethics committee' - do the authors mean 'local research ethics committee? [Minor essential]

This correction has been made,

3. Readers might want to know why the group was divided by age, particularly when there is some suggestion that physical access to computers (practice nurses versus community nurses) makes a difference and seems the most plausible explanation. Were the community nurses predominantly in the 50 plus age range - as this might be another explanation for the findings, rather than age alone? [Minor essential]

We have added a short paragraph in the description of the PCT in the method to explain that all the practices in the PCT are computerized, and have a fixed link to the Internet. This is something that we should have included as it is possible that readers from outside the UK would not be aware of the level of computerization in UK practice. In theory access should not have been a problem, and we would contend that the data supports this - with only a few nurses having access problems.

4. If the question is the difference between under 50 and over 50, why not make a 2 X 2 table (table 2) - this should still be significant, and it may deal with the problem that the 30-39 group is small. The combined group (30-49) might smooth some differences between the study group and the population at large (Graph 1) [Minor discretionary]

We have dichotomised the data as suggested. We have removed table 2, and included this data as one line in table 1. (Partly because the reviewer "C" had suggested shortening the length of the piece and reduced the number of tables.) The text has been amended to reflect these changes.

5. I would like a statistician to look at the results, and to comment on whether sufficient data have been included in the paper for readers to check the analysis for themselves. [Minor essential]

This is dealt with in our response to later reviewers comments. We were given additional statistical advice

that we would be better looking at mean ranks (rather than mean scores) was a more statistically robust measure. As we no the ranks - but we can't infer the "distance" between the scores.

6. The discussion mentions 'previous surveys' which could imply at least a year previous. However, one of the references indicates that the results for a previous survey are only now 'accepted for publication'. I'd like more clarification of the timing of previous surveys. [Minor essential]

The reference to these studies now appears in the introduction, and the statement that these are based on data which is over two years old has been made stronger. Reference 18, now reference 11, has now been published and its full reference now appears. It is based on data which is two years old. There was a long delay between the end of the peer review process and publication. We set out to publish this paper in BMC because of the long delays we had with this paper.

7. In the discussion, I would like clarification of the point above (comment 3). The point that jumps out at me is the cost of providing the type of training that seems most acceptable, that of one to one training and workshops. Perhaps the authors might like to comment on this, and be more specific in their conclusions. [Minor discretionary]

A good idea, we have amended the discussion accordingly.

B: Peter Griffiths

1. In presenting the results the claim is made that 'due to the small sample size they (the trends noted in access to PCs - table 1) are not statistically significant. A similar claim is made regarding a trend as observed in the data in table 5. This is incorrect it implies that you know what the result would be if the sample was larger which of course you don't - if you did you wouldn't need larger samples. Rather simply there was a trend (as described) but it was not statistically significant. The discussion can deal with the importance and substance of such trends in the light of the pattern of results observed and can make recommendations for further research to make up for the small sample here.

This point is acknowledged and reference to the sample size is removed.

2. The p values of statistical tests are not reported consistently. I would suggest that in all cases where a significance test is reported that the exact p value be given in order that the validity of conclusions and the strength of the claim can be assessed by the reader. Certainly you should be consistent in reporting with some p values given and some not.

This has been done for all the tables except tables, except table 2 where SPSS prints out 0.000 value for p; implying $p < 0.001$. Table 3 is a report of frequencies so has no p value.

Discretionary Revisions (which the author can choose to ignore)

1. The interest in this paper could be international - . UK specific terms should be used with an eye to an overseas reader who might need to be told that it is the UK's National Health Service that is doing this investment and require an explanation of where Sussex might be found and what a PCT is!

This is a very reasonable point - and the NHS is now defined as suggested and information provided about Sussex and PCTs.

2. In the abstract, the sample size should ideally be specified.

This is now included.

3. Although a link is given to the questionnaire a thumbnail description of it (in terms of content as well as format) would aid the reader.

In response to the first reviewer's comments the whole questionnaire is included as an appendix.

4. A typology of categories of respondents is identified (end of methods section) but it is rather confusing and does not seem to be used (certainly not consistently) when describing results which refer to more commonly recognised professional groupings (practice nurse, dn HVs and midwives and others. Certainly CPNs would meet the definition of district nurse given as would midwives and HVs.

A figure has been created - to provide a more detailed typography of UK nurses, which we hope provides clarity.

5. The implication of the study (as given) is that community nursing (sic) needs more 'silver surfers'. In this you seem to equate use of the internet and use of an EPR. Its a good line but the two are not synonymous - all resources but the EPR in particular will require much more than generic web skills.

The data shows that there is a trend for nurses over 50 to use the Internet and electronic medical records less. The authors therefore feel that this is a reasonable assertion.

6. Your discussion makes it clear that there is a close relationship between this study and other work done by members of this research group. This paper would be more valuable if it were set clearly in the context of this past work. Instead it feels as if the introduction hedges around it in order to justify its own existence.

In response to the comments above we have more clearly linked this study to earlier work. We conducted this study - some two years after our last one - to see if things have changed. There is now considerably more access and use of IT by nurses (than we reported previously.) However, despite reporting that they receive more training nurses over 50 years are using the Internet (and electronic data) less than their younger colleagues.

C: Bendix Carstensen

The paper describes a survey of 105 nurses with a 64% response rate, about their IT use. It is not clear whether the main focus is to describe the results as functions of age or profession.

This analysis is primarily by age, as we considered this the main explanatory variable.

The presentation is overly detailed and most tables could be collected in one or two by showing each of the variables versus either age or profession, depending on which was considered the main explanatory variable.

The material is probably too thin to warrant a detailed analysis by (logistic/ordinal/linear) regression of each of the variables considered on age / profession, although such models are essentially underlying all of the tabular analyses.

Analysis by age and professional group to see if one age-band of one nursing profession was particularly lacking in skills - resulted in tiny subgroups for analysis and was probably not reliable.

Tables: Collect all tables in one or two classified by age on one side and all relevant variable on the other. Likewise with profession if considered relevant.

We have removed table 2 to reduce the number of tables.

Table layout: No vertical lines, horizontal lines should be kept to a minimum.

We have removed the vertical lines and minimized the horizontal

Statistics: Give p-values with 3 digits, not as $p < 0.01$.

This has been done

Graph: It is unclear why the age-distribution of the sample is compared to other populations.

We wanted to indicate how our sample compared with the national average

General advise: Shorten dramatically.

We have tried to remove text, however some of the other reviewers points require more explanation.