Reviewer’s report

Title: Care relationships at stake? Home health care personnel's experiences with digital medication dispensers - a qualitative study

Version: 0 Date: 02 May 2017

Reviewer: Tom Kingstone

Reviewer's report:

Dear authors,

Please accept my personal apology for the delay in providing this review. I thank you for your patience and for your efforts in putting this manuscript together. Although I found it to be an interesting manuscript, I consider there to be quite a few areas in which it could be improved. I provide my comments under the manuscript (sub)headings, for clarity. I have been thorough in order to assist you when making revisions. I trust that you take the following comments in the constructive tone in which I have written them.

Introduction/Background literature

Overall, I feel this section (combined) is too long and would benefit from being condensed. This section would also benefit from further critique (critical review), it is not clear that this is an exhaustive review of the literature and is therefore difficult to confirm that 'a huge knowledge gap concerning the impact and consequences of implementation of new technology in home healthcare' exists.

I appreciate the authors' attempts to contextualise the study and provide a Norwegian perspective. However, the historical context is unnecessary. Perhaps paragraph 1 in the 'background' section could be incorporated into the 'introduction' (e.g. multidisciplinary workforce and key tasks/roles) to provide a present day context.

The section that begins 'The RNs and ASEs can place…' and ends '…to take the dose at the right time.' I am not sure this level of description is necessary. This section is not referenced, what is the source of this observation?
Aim

The aim is clearly stated. However, the authors identify 'healthcare professional staff' as the target group and yet describe in the methods 'health care personnel'. Please define who this is and keep with a consistent label/identifier. This problem occurs throughout, please rectify this. The authors provide a nice description of the different levels of health care providers (multidisciplinary workforce) in the introductory paragraphs - could this be referred to in the definition of participants?

Methods

I find the justification of qualitative methods to be inadequately described. Is this study really about exploring a 'new phenomenon'? I would argue that health technology in the home is not a new phenomenon. 'To allow new perspectives and unexpected experiences to appear…' requires clarification, this reads as though the researchers are detached from the whole process of data collection and application of methods. A more careful consideration of qualitative research is needed.

An additional statement to link the need to: 'explore multiple views from the multidisciplinary workforce involved in the delivery of home care' would strengthen the methods.

'An open-ended topic guide' - what does this mean? Please clarify. Do you mean you had open questions in your topic guide? An open-ended topic guide suggests the interview to go on forever.

The section beginning: 'Considering policy demands for telehealth…' to '…to relevant cases.' Can be removed and added to discussion of limitations of the study.

Please refrain from using the term 'informants' this is an outdated term in qualitative research (and has negative connotations).

I am not clear on the process of recruitment the description: 'done by leaders in the selected municipalities' is insufficient. Who are the leaders? Are these gatekeepers? How were they identified? I note that you have included 'inclusion criteria' was the sampling purposive, then? Please state the aim of the sampling method (i.e. to achieve a diverse sample of...)
Recruitment and sample

Table 1 would benefit from additional information e.g. age, gender, years in service if this information is available and will not risk confidentiality.

Data collection

'A thematic interview guide' - do you mean a 'topic guide'? To call this a thematic interview guide suggests you have already identified your themes prior to data collection (therefore not truly inductive). Table 2 indicates topics but I am unclear about how the researchers explored these topics with participants. This is where the term 'open-ended topic guide' seems ambiguous.

Please clarify the following statement: 'Each interview was conducted by one or two researchers from the research team'. Up until this point I was not aware that semi-structured interviews included one-to-one and group interviews - please highlight this in the methods section.

The statement: 'citations from the informants presented in the results section were transformed from colloquial expressions to written language' - please clarify what you mean by this, do you mean translated? Please consider the implications that this 'transformation' had for meaning (no doubt something will be lost in translation, which is a shame!), was the language translated prior to analysis or after and only for presentation in publication? I would like to see quotes in original format provided as an appendix (to maintain cultural sensitivity).

More clarity is required around who took part in one-to-one interviews, group interviews, telephone interviews. How do you distinguish between a group interview and a focus group? Just need to clarify this.

The year and/or time of year is not stated for when data collection occurred.

Analysis

I find the analysis process to be inadequately described. For example, it is insufficient to say 'constant comparison method' or 'after an initial analysis'. A more careful consideration of this description is required.

The language appears ambiguous and use of terms is unclear e.g. 'meaningful entities' and topics, themes, tracks, codes, units, citations, sub-categories and categories gets a bit confusing.
Further explanation is required to help build a picture of the analysis and how it has taken shape (what happened to the other data from the other track - why were they separated?)

Only in the analysis section are patients defined as (home care service user) - this should come sooner?

The research team all contributed to data analysis - but how were competing interpretations of data considered?

Findings

General comments

For context, when including transcript extracts it would be useful to report additional information (e.g. which municipality the worker is from) as 'nurse' is a bit vague.

(1) Policy expectations about cost-effective delivery of care

This theme seems to talk more about freeing up time and resources - more 'efficiency' and 'targeting healthcare based on needs' rather than cost-effectiveness alone. Little reference is made to policy - it is unclear whether policy expectations is arising from participants data or not.

Re: 'both patient and health care worker trusted that the benefits of the technology were higher than costs…' Do you mean 'more important than the cost'? Also, I would limit the extent to which comments are drawn about patient perspectives (check throughout) - the data is limited to healthcare work perspective and their second-hand accounts of patients/service users.

I am unclear why the [ ] are used in the second extract? Also, I would prefer for the original text only to be included as well as the << >>. The extract highlights something much deeper than the sub-heading of the theme suggests e.g. rights of access to service, autonomy, decision-making, trust - some of which you have identified. Would you perhaps consider changing the title of the theme to better reflect this?

(2) Shifts towards empowerment for the suitable patient

Re: 'new technology could empower care recipients towards autonomy' perhaps rephrase to 'new technology could support the autonomy of service users in the context of their healthcare'
Re: 'The traditional care model… was straining for some patients' - I do not think you can make this claim in the findings as your data is limited to professional perspectives.

Empowerment speaks to autonomy (to act independently without interference) but also to control which is important for self-management, which is not picked up on by the authors - is self-management important in a Norwegian context?

The extract re: dementia highlights issues around cognitive capacity (assumed consent) and risk management - the dispenser in this case seems to have been an inappropriate device that could have caused the patient to become distressed. The extracts in this section raise important points about mental health and illness - further consideration of this would add to the findings and discussion (has implications for training and awareness across the multi-disciplinary workforce).

(3) Surveillance mechanisms in the technology

The sub-heading is missing 'in the technology'

The extract re: early rising is interesting. It seems that the social relationship actually became the obstacle to appropriate health care provision - the service user prioritised self-image - implications are that she was "caught out" by the machine, is this an invasion of privacy? This would no doubt cause embarrassment. Raises questions about honesty of service users. What impact and how is this related to the previous theme of empowerment? Difficult to comment too much without the patient perspective.

Discussion

I would like the discussion section to focus more on the health care professional's perspectives and roles - presently I feel the discussion focuses too much on the service user, which although is important, is beyond the reach of the data.

Discussion should deal with: (1) Application of policy and the balance between cost-effectiveness and delivering patient care… (2) Patient safety/risk/appropriateness and the role of health care professionals in empowering patients (no mention of self-management?)… (3) Surveillance (consent, control, implications for empowerment) - there are some really important implications for autonomy, control and privacy in this.
Strengths and limitations

Generalizability could be improved if more detail was given around the participants and also the municipalities (description of area, urban/rural).

The lack of a patient perspective is lacking and represents a clear limitation not considered.

Consent for publication

The authors have indicated 'not applicable' - further clarification is needed that as part of consent procedures participants were made aware that interview extracts would be used in publication of findings.

What is missing

A contrast between the different health care professionals.

A contrast between data from different municipalities.

Both seem important and would be expected to emerge from the case study design and constant comparison analysis. Also, there does not seem to be discussion around the different compositions of multi-disciplinary workforces across the various municipalities. I find it interesting that a GP contributed from the small municipality (a rural practice?) and physiotherapists contributed to the large municipality.

A comparison with the international literature seems to be missing, which would help in terms of generalizability of findings, the use of healthcare technology in the home and ageing in place has global importance (more so for the developing world).

References:

'Kvale and Brinkman' has been referenced twice. Please check references for accuracy a couple of authors have been capitalised.
General comments

Inconsistent use of terminology

Health care personnel? Home healthcare professional staff? Home health carer? Healthcare worker?

Informants? Staff? Caregivers?

Users? Service users? patients?

Health care or healthcare or health-care

Typos and grammatical errors:
I provide the following for examples but please check throughout.

Abstract

'Both patient and healthcare workers needed to be ascertained…' (unsure what this means)

Background section

'There an increased pressure'

'face-to-face interaction… is a premise for any care to happen' (unclear)

'self-administrate' (should be 'self-administer')

'Therefore, the healthcare worker workers often visit the patient several times a day to deliver medicines' (do you mean deliver a package of medicine or to assist patient to take particular medications?)

'patients may receive care several times a day and meet many different persons during a patient trajectory' (the term trajectory is not clear)

The word 'ascertained' is used a few times throughout - 'to be certain' would be the correct term.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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