PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	A qualitative study exploring the key determinants of information gathering to inform the management of over-the-counter (OTC) consultations in community pharmacies
AUTHORS	Cassie, Heather; Duncan, Eilidh M.; Gibb, Elizabeth; Power, Ailsa; Young, Linda; Newlands, Rumana; Watson, Mags

VERSION 1 – REVIEW

REVIEWER	Asam Latif The University of Nottingham School of Health Sciences Queen's Medical Centre Nottingham England NG7 2HA.
REVIEW RETURNED	26-Feb-2019

GENERAL COMMENTS	Review: Re. A qualitative study exploring the key determinants of information gathering to inform the management of self-care consultations in community pharmacies Thank you for the opportunity to review this manuscript. I enjoyed reading this paper. This study used semi-structured interviews (30 interviews with pharmacists (n=19) and non-pharmacists (n=11)) across Scotland to explore the key determinants to information gathering during self-care consultations in community pharmacies. This is an interesting paper and should do well following some revision. My feedback is mainly about clarifying methodological aspects and purpose of the research. Abstract: Perhaps reconsider the term 'non-pharmacists' as this is ambiguous and may suggest that you interviewed patients – use of Medicines Counter Assistants may be more helpful? Perhaps consider including the term Over The Counter (OTC) in the abstract / title to facilitate understanding? It would be helpful if there was a clearer link between the conclusions drawn and the results. What does this work say about pharmacy staffs' ability to gather information on OTC medicines and how are the identified key determents relevant? What specific interventions are being referred to (Line 34)? Strengths and Limitations of this study Perhaps mention that only 11 MCA were interviewed. Introduction – page 4 It would be helpful if the authors detailed what is currently known about the process of gathering patient information and how this

	increases the likelihood of safe, effective and person-centred outcomes (as stated on line 4-5). What is the evidence base here? It would also be helpful (especially for international readers) to provide a little more context around how community pharmacy in Scotland fits into the wider healthcare agenda. May also be useful to distinguish between OTC, P and POM medicines and respective governance / interactions. Detail protocols / mnemonics that are often used (WWHAM) for handling OTC purchases. This provides useful context as these are referred to in the results. It would be helpful to describe whether there are consultation areas available and what these are used for. Perhaps detail what training / development MCA receive. Methods: page 4 More justification is needed as to why the Theoretical Domain Framework (TDF) was deemed appropriate as opposed to other frameworks. Do the authors think that by adhering to this framework that other relevant emergent themes that are typically derived from qualitative studies could have been lost? Study Participants: sampling strategy needs justification: 1. What is the NES mailing list? (line 48). 2. In the topic guide (line 3 page 23), it is clear that the information gathering refers to consultations for Pharmacy medicine requests. This should be made clear in the introduction and abstract. Given most consultations are managed by MCA in the community pharmacy setting, is there a limitation that only 11 were interviewed? WAS data saturation achieved? 3. What are the potential limitations of conducting interviews by phone? Results: page 5 Sample characteristics: what is meant by the response rate? Were all 49 professionals not invited to an interview? Would be helpful to have a clearer link to how the 14 domains were reduced to eight salient domains and then conceptualised into four overarching themes. Discussion Page 11 Line 6 – authors refer to the “second stage of the TRiaDS-P programme2. What was the first stage? How many stages are there – perhaps outline the full programme to ease interpretation. Line 49 – please clarify how the findings of this study leads to a need for an intervention? What will this look like? Is this study suggesting that pharmacist should have access to medical records to supply OTC medicines (Line 11)? References Please check whether the references are in the correct format for the journal.

REVIEWER	Afonso Cavaco Faculty of Pharmacy, University of Lisbon
REVIEW RETURNED	11-Mar-2019

GENERAL COMMENTS	I would like to thank the editors and the authors for the opportunity to read the manuscript “A qualitative study exploring the key determinants of information gathering to inform the management of selfcare consultations in community pharmacies”. This is a very well written research paper, with a clear structure and content, soundly supported by best practice in qualitative studies. I have a few comments to make.

	General comments. Although the study introduces innovation and theoretical rigour through the robust use of TDF, I was unable to see a significant degree of originality in the findings. Actually, the UK (including Scotland) has been for many decades one of the most prolific countries concerning the production of studies around self-medication. Also, I was somewhat surprised with the short number of bibliographic references, even noting the specific aim of the work i.e. the focus on information gathering. The COREQ was comprehensively followed giving substance to the study validity. Nevertheless, I would recommend evolving for more reliable criteria demonstrating trustworthiness (findings credibility) and authenticity (ontological, educative, catalytic and/or tactical). Due to the expected audience of this paper, pharmacy practice researchers should try to demonstrate their rigour beyond the usual hallmarks. Specific comments are as follows. Page 4, line 17. This sentence may read as if Scotland does not observe people using community pharmacies as the 1st port of call. Is this really the case? Page 4, line 32. I was expecting here, at the end of the Introduction, a clearer statement regarding the study objective(s). Page 5, line 53. There was a wide range of interview duration (45 minutes), even using a semi-structured guide. Is there a relevant explanation? Page 5, line 54. Why there is a 4 years gap between data collection and publication? It seems strange to choose BMJ Open, a fast-track journal. How this might have influenced findings utility for policy making? Page 9, line 15. Knowing this subheading is referring to comparisons between PH and MCA, I was expecting here a quote from MCAs. Page 10, line 1. In my opinion, Figure 1 does not represent a conceptual map. There are no links between concepts, nor a representation of the overarching themes. Page 11, lines 24-26. Although I'm not fully aware of the remote areas of a large territory such as Scotland, again I find strange to exist such an assumed variation from a regulated healthcare site (community pharmacies). What evidence exist of such a variation within a licensed practice? Page 11, line 42. I was unable to find the reference mentioned here. Actually, the Discussion only introduces 3 new references, which seems to me scarce for a research paper in this topic.

VERSION 1 – AUTHOR RESPONSE

Reviewer 1:		
Abstract		
1. Perhaps reconsider the term 'non-pharmacists' as this is ambiguous and may suggest that you interviewed patients – use of Medicines Counter Assistants may be more helpful?	This has been changed to Medicine Counter Assistant (MCA) in the abstract and throughout the document.	Page 2 and thereafter.

2. Perhaps consider including the term Over The Counter (OTC) in the abstract / title to facilitate understanding?	Self-care consultations has been changed in the title, abstract and thereafter.	Pages 1, 2 and thereafter.
3. It would be helpful if there was a clearer link between the conclusions drawn and the results. What does this work say about pharmacy staffs' ability to gather information on OTC medicines and how are the identified key determents relevant?	The last paragraph of the abstract has been revised to address this as follows: Multiple influences and complexities affect the effective management of OTC consultations. While similar factors impact upon both pharmacists and MCAs at a patient, professional and environmental level, subtle differences exist in how these influence their management of OTC consultations. This study highlights the importance of tailoring interventions to reflect different roles, functions and responsibilities of community pharmacy personnel.	Page 2.
4. What specific interventions are being referred to (Line 34)?	This statement has now been removed as per point 3 above.	Page 2.
Strengths and Limitations		
5. Perhaps mention that only 11 MCA were interviewed.	Data saturation was achieved from the 11 interviews. This was based on the criteria described in Francis e al. 2010. Eight interviews were conducted with a stopping criteria of 3 further interviews where no new themes emerged.	N/A
Introduction		
6. It would be helpful if the authors detailed what is currently known about the process of gathering patient information and how this increases the likelihood of safe, effective and person-centred outcomes (as stated on line 4-5). What is the evidence base here?	This has been addressed in the revised Introduction. References have been included to support this statement.	Page 4.
7. It would also be helpful (especially for international readers) to provide a little more context around how community pharmacy in Scotland fits into the wider healthcare agenda.	This has been addressed in the revised Introduction.	Page 4.
8. May also be useful to distinguish between OTC, P and POM medicines and respective governance / interactions.	This has been addressed in the revised Introduction.	Page 4.
9. Detail protocols / mnemonics that are often used (WWHAM) for handling OTC purchases. This provides useful context as these are referred to in the results.	This has been addressed in the revised Introduction.	Page 4.
10. It would be helpful to describe whether there are consultation areas	We have not added information about consultation areas. There are many factors which are relevant to	N/A

available and what these are used for.	the management of OTC consultations and to include them all is beyond the scope of this paper.	
11. Perhaps detail what training / development MCA receive.	This has been addressed in the revised Introduction.	Page 4.
Methods		
12. More justification is needed as to why the Theoretical Domain Framework (TDF) was deemed appropriate as opposed to other frameworks.	The text has been updated to justify the choice of the TDF: This study comprised a series of semi-structured telephone interviews underpinned by the Theoretical Domain Framework (TDF). The TDF was developed as a theoretical framework for use in implementation research. It includes a number of behavioural theories and constructs and proposes that determinants of healthcare professionals' behaviour can be clustered into 14 'domains'. The TDF has been widely used to identify barriers and facilitators to evidence-based practice, as well as to explain variation in practice and fits into an intervention development methodology (Behaviour change wheel) that assists with developing a theory-based intervention. One of the benefits of applying this theory is the ability to assess implementation problems and support intervention design. In addition, interviews guided by the TDF have been found to encourage participants to consider a wider range of influences on behaviour than other interview approaches.	Page 4.
13. Do the authors think that by adhering to this framework that other relevant emergent themes that are typically derived from qualitative studies could have been lost?	No. Where emerging themes did not appear to map to one of the 14 domains they were coded to 'other' to ensure that all data was captured and included in the overall analysis. Furthermore, the interview guide included prompts for interviewees to consider whether anything they felt that was important that hadn't been covered the topic guide and hence could still be included. In addition, as per Point 12. Interviews guided by the TDF have been found to encourage participants to consider a wider range of influences on behaviour than other interview approaches. Dyson et al. 2011.	
14. Study Participants: sampling strategy needs justification	Justification and reference added: A maximum variation sample was generated reflecting pharmacy type,	Page 4

	Health Board and deprivation. This is appropriate when the sample size is small and if carefully drawn, can be as representative as a random sample. Seawright, 2008.	
15. What is the NES mailing list? (line 48).	The text has been updated to describe this: This is a national online course booking and management system	Page 4
16. In the topic guide (line 3 page 23), it is clear that the information gathering refers to consultations for Pharmacy medicine requests. This should be made clear in the introduction and abstract. Given most consultations are managed by MCA in the community pharmacy setting, is there a limitation that only 11 were interviewed? WAS data saturation achieved?	Both have been revised to reflect this. As per point 5 above.	Pages 2, 4.
17. What are the potential limitations of conducting interviews by phone?	Text added as follows: Telephone interviews, like face-to-face interviews, allow a two-way interaction between the researcher and the participant, with the added advantage of being more cost effective and easier to schedule. It could be argued that cues picked up through body language may be missed over the telephone, however given the topic being discussed we would argue this has not had a detrimental impact upon data collection.	Page 12.
Results		
18. Sample characteristics: what is meant by the response rate? Were all 49 professionals not invited to an interview?	Yes, all 49 participants were invited to be interviewed but not all participants responded and took part. The response rate relates to those of the 49 who did participate in an interview.	N/A
19. Would be helpful to have a clearer link to how the 14 domains were reduced to eight salient domains and then conceptualised into four overarching themes.	This is described in the methods section as follows: Following the approach described by Atkins et al. the most salient beliefs were identified based on frequency and content i.e. strongly held or divergent view-points…Specific beliefs within dominant domains were then explored. Where specific beliefs related to similar aspects of practice, these were grouped, and overarching themes were identified.	Page 6, Table 3.

	Table 3 presents domains in order of dominance	
Discussion		
20. Line 6 – authors refer to the “second stage of the TRiaDS-P programme2. What was the first stage? How many stages are there – perhaps outline the full programme to ease interpretation.	The introduction has been revised to outline the full programme as follows: The TRiaDS programme, funded by NHS Education for Scotland (NES) uses a framework for the translation of guidance and translation into practice. The scope of the TRiaDS programme was extended in 2013 to include community pharmacy. The TRiaDS in Pharmacy (TRiaDS-P) programme comprised four stages: (1) A service-driven prioritisation exercise to identify priorities for community pharmacy practice improvement in Scotland. Through a systematic, service-driven prioritisation exercise, effective management of OTC consultations was selected as the target for improvement; (2) Semi-structured interviews to explore the key determinants to information gathering during OTC consultations; (3) A national theory-based survey to identify key determinants of the target behaviour; (4) Intervention development comprising identification of options for practice improvement interventions. Stage 1 of the programme identified that the optimal management of OTC consultations is dependent upon effective information gathering and as such, this formed the target behaviour of stage 2, explored by this current study, the purpose of which was to identify the key determinants to information gathering during consultations for P medicine requests in community pharmacies in Scotland.	Page 4.
21. Line 49 – please clarify how the findings of this study leads to a need for an intervention? What will this look like? Is this study suggesting that pharmacist should have access to medical records to supply OTC medicines (Line 11)?	The intention here was to state that any intervention needed should target all three levels – patients, professional and organisational. The following line has been removed for clarity: ‘suggesting the need for interventions targeting all three of these interfaces.’ The authors are not stating that pharmacists should have access to medical records rather stating that this was one barrier raised during the interviews.	Page 12

References		
22. Please check whether the references are in the correct format for the journal	Thank you, references have been changed to Vancouver style as per BMJ Open guidelines.	Pages 21, 22.
Reviewer 2:		
General comments		
Although the study introduces innovation and theoretical rigour through the robust use of TDF, I was unable to see a significant degree of originality in the findings. Actually, the UK (including Scotland) has been for many decades one of the most prolific countries concerning the production of studies around self-medication. Also, I was somewhat surprised with the short number of bibliographic references, even noting the specific aim of the work i.e. the focus on information gathering. The COREQ was comprehensively followed giving substance to the study validity. Nevertheless, I would recommend evolving for more reliable criteria demonstrating trustworthiness (findings credibility) and authenticity (ontological, educative, catalytic and/or tactical). Due to the expected audience of this paper, pharmacy practice researchers should try to demonstrate their rigour beyond the usual hallmarks.	Thank you for your comments. Additional references have been added. As per the Editors request a SRQR checklist has been included.	Pages 11 and 12; 21 and 22. Supplementary file 4.
Specific comments		
1. Page 4, line 17. This sentence may read as if Scotland does not observe people using community pharmacies as the 1st port of call. Is this really the case?	Yes, it is the case that people do not always use pharmacies as the first port of call. There is evidence cited in the introduction regarding health seeking behaviour for these conditions from ED and general practices rather than pharmacies. (Fielding et al., 2015; Transforming urgent and emergency care services in England. Urgent and emergency care review end of phase 1 report. Appendix 1—Revised Evidence Base from the Urgent and Emergency Care Review. Leeds: NHS England, 2013.)	Page 4
2. Page 4, line 32. I was expecting here, at the end of the Introduction, a clearer statement regarding the study objective(s).	Sentence added to reflect this: The purpose of this study was to explore the key determinants of information gathering during OTC consultations in community pharmacies.	Page 4
3. Page 5, line 53. There was a wide range of interview duration (45 minutes), even using a semi-	This relates to how 'talk-active' participants were. The authors experience of similar studies	N/A

structured guide. Is there a relevant explanation?	suggests that this a normal range in duration for interview studies conducted with different professional groupings or health care disciplines.	
4. Page 5, line 54. Why there is a 4 years gap between data collection and publication? It seems strange to choose BMJ Open, a fast-track journal. How this might have influenced findings utility for policy making?	This interview study forms part of a four-stage project and hence work has been ongoing over the last four years. A four-year gap is not unusual between data collection and publication. The first stage of this project was published in 2018: Newlands RS, Power A, Young L, Watson M. Quality improvement of community pharmacy services: a prioritisation exercise. International Journal of Pharmacy Practice. 2018;26(1):39-48	N/A
5. Page 9, line 15. Knowing this subheading is referring to comparisons between PH and MCA, I was expecting here a quote from MCAs.	The text states “These beliefs did not feature strongly in the non-pharmacist interviews.” And as a result, it was not considered relevant to include an MCA quote on this theme.	N/A
6. Page 10, line 1. In my opinion, Figure 1 does not represent a conceptual map. There are no links between concepts, nor a representation of the overarching themes.	Point noted. The diagram has now been referred to as a ‘mapping’ diagram rather than as conceptual	Page 10 and Figure 1
7. Page 11, lines 24-26. Although I’m not fully aware of the remote areas of a large territory such as Scotland, again I find strange to exist such an assumed variation from a regulated healthcare site (community pharmacies). What evidence exist of such a variation within a licensed practice?	This refers to access to training and other resources which pharmacy staff may have to travel to access. We have added an example in the text to clarify this: e.g. the islands of Orkney and Shetland	Page 12.
8. Page 11, line 42. I was unable to find the reference mentioned here. Actually, the Discussion only introduces 3 new references, which seems to me scarce for a research paper in this topic.	We can also no longer find the following reference and hence have removed it. NPA launches training with a W-WHAM. Pharm J 8th July 1989;243(40). This has now been addressed in the revised conclusion.	Page 12; References. Pages 12 and 13; References

VERSION 2 – REVIEW

REVIEWER	Asam Latif The University of Nottingham, England

REVIEW RETURNED	19-May-2019

GENERAL COMMENTS	Thank you for this revised version which is a lot stronger. I have only 2 further points: Discussion first paragraph: i suggest the authors should discuss in more detail what the findings from the identified domains actually mean in practice. At present, these are just presented as a list without critical engagement. This may increase the originality of the findings. P5 Line 24: Regarding the NES portal – people from outside Scotland will be unfamiliar with this. Please can you clarify why this was an appropriate choice of database to recruit from?

REVIEWER	Afonso Miguel Cavaco Faculty of Pharmacy, University of Lisbon
REVIEW RETURNED	18-May-2019

GENERAL COMMENTS	I would like to thank the authors for the changes in the manuscript. No further comments from my side.