PEER REVIEW HISTORY

ARTICLE DETAILS

TITLE (PROVISIONAL)	"It stayed there, front and centre": Perspectives on community pharmacy's contribution to front-line health care services during the COVID-19 pandemic in Northern Ireland
AUTHORS	Patterson, Susan M.; Cadogan, Cathal; Barry, Heather; Hughes, Carmel

VERSION 1 – REVIEW

REVIEWER	Schafheutle, Ellen The University of Manchester, Stopford Building, Oxford Road, Manchester, Division of Pharmacy, School of Health Sciences, Faculty of Biology Medicine and Health
REVIEW RETURNED	18-Jun-2022

GENERAL COMMENTS	Please note I was invited to review this qualitative paper and also a survey paper entitled "A cross-sectional questionnaire study of the experiences of community pharmacists during the early phases of the COVID-19 pandemic: preparation, experience and response" by the same authors. I accepted to review both papers, as I thought there may be a way to connect the two papers, particularly if both are accepted by BMJ Open. There is clear linkage and indeed some overlap between the two papers, so one consideration might be whether the paper could not be strengthened significantly by reporting survey and interview findings alongside each other. Many of the services which are mentioned here (e.g. on page 10/11), will make more sense if they have been defined/ described as they are in the survey paper. Clear differentiation needs to be made between initiatives driven by policy (and reimbursed) and those driven from within community pharmacy (if any). General comments This paper reports qualitative insights from community pharmacists and relevant stakeholders, on the experiences and learning from the early response to COVID-19 in community pharmacy. This paper has great potential to make a very novel, insightful and valuable contribution, with a number of key learning points and recommendations for policy makers not only in community pharmacy but across primary care. However, much of the current discussion focusses on a summary of finding and how they confirm evidence from published studies. I will provide more detail on how I believe this paper could be significantly strengthened in my comments below, particularly under the 'discussion' heading. I recommend the authors use a theoretical framework for their study (they mention the Pharmacy Emergency Preparedness and Response Framework developed by Aruru et

	al.17 in the discussion, but others exist also), then integrate their findings with the wider literature, particularly more broadly across primary care and integration, to make a number of well informed recommendations to policy makers. Introduction The introduction is short and mainly focusses on a summary of the findings reported in the survey paper by the same authors. If the intention of this paper in particular is to use experiences during COVOD-19 related changes to practice in community pharmacy to inform learning for policy formation for community pharmacy as an integral part of a wider primary health care provision, then some of the related literature ought to be covered here (and then returned to in the discussion). This will be particularly important for the broad readership of BMJ Open. Methods Page 5 (6 BMJ Open): PPI. Great to see involvement. Were they involved in data analysis and particularly interpretation? The same goes for the other stakeholders on the advisory board. A number of publications are available, and papers have been published, which advocate for the use of a theoretical framework to investigate the pandemic response, in different countries and at macro as well as meso and micro policy level. I am wondering whether the authors have considered using such a framework, and combining deductive and inductive qualitative analysis. Much has now been published, and some of this evidence should be covered in the introduction, and could also be used for a more theory-informed approach to analysis and interpretation. Results Top of page 8/9: It is sensible not to report individual participants' characteristics, to protect anonymity. Nevertheless, it would be helpful to include a comment about the inclusion of a mix of genders, ages, and location/ type of community pharmacies. Are the comments on page 11/12, that pharmacies were accessible (as walk-in and phone calls) as health care professionals, for advice and support, when others (e.g. GPs) had closed their doors to the public – not in contradiction to the previous point that "Medicines supply was the core service that took priority during the pandemic" (top of page 9/10) Page 14/15: It is interesting to read that the focus of other stakeholders appeared to be on medicines supply alone. Discussion The discussion, at present, is mostly community pharmacy focussed and mainly cites published evidence to confirm this study's findings. However, there are some really valuable lessons which could be picked up and framed much better by drawing on policy developments across the UK and indeed internationally, and by better situating findings as relevant across primary care, and the need for much better integration. The use of a theoretical framework – used throughout the paper – would really help with this. I will just mention a few examples here, which are noted in the results, to give ideas as to areas for recommendations: - emergency supply – evidence exists, and services have been implemented in England at least (possibly in Scotland too), which enable the NHS funded urgent supply of medicines (following referrals from NHS111 or general practice) under the broader urgent care agenda

	- electronic prescribing: again, evidence exists here to demonstrate what works and where hindrances may be when implementing such a service - repeat dispensing and access to patients' records are similar areas of research and policy development and could be employed to better inform this discussion - independent prescribing: are developments similar in Northern Ireland to those in the other parts of the UK, as regulated by the General Pharmaceutical Council? Again evidence exists. - most importantly, I think the issue of lack of coordination in primary care, and the need for better integration, including electronic communication – much evidence exists here, both from England and Scotland, but also more globally (particularly English speaking).

REVIEWER	Cooper, Richard University of Sheffield, ScHARR
REVIEW RETURNED	23-Jun-2022

GENERAL COMMENTS	A really interesting and vernally well written paper which is welcome and adds to the still relatively modest empirical literature covering (community) pharmacy and the pandemic. Puts on record the adaptations and value of community pharmacy as viewed in context of NI. Hope the comments below help but main ones are:1 - intro lacked context to existing literature which only appears in discussion and too much on linked survey paper; 2 - methods clarification on CP sampling and framework for TP but see suggestions; 3 - could themes be reviewed for more edge and normativity and consider significant overlaps which diluted the powerful messages in there and too many quotes (one is usually enough per theme/sub-theme. Title - not sure the quote helped and usually argued to make it harder to find a paper later so perhaps reconsider? Abstract - clear and well balanced. Initial descriptions of the 4 themes were very HSR and only in the bracketed further description did richer and more significant detail come out but fine for this health audience. Introduction - 5/16-29 seemed too detailed on the parallel quant survey paper and readers need more of a broader overview (eg Costa et al and Austin et al (as covered in the discussion but also Paudyal V et al Provision of clinical pharmacy services during the COVID-19 pandemic: Experiences of pharmacists from 16 European countries. Res Social Adm Pharm. 2021 Aug;17(8):1507-1517. doi: 10.1016/j.sapharm.2020.11.017. Epub 2020 Nov 30). Methods - good detail and clear and transparent. PPI good to note. 7/10 reference to randomising if more than 20 was very unusual for qualitative does this mean there was no attempt to be purposive? Also, theoretical/data saturation is mentioned but this would not be done with a pre-determined quota and this would benefit from clarification. It might be good to then refer to it as quota (ie a form of convenience and not purposive) sampling and remove saturation. The stakeholder section did refer to convenience but actually seemed more purposive in being more transparent about where stakeholders were identified. The analysis section would benefit from clarification also in relation to using a coding framework. Braun and Clarke's original 6 stage thematic analysis did not embrace this but the later 2019 paper

	gives more of a range and perhaps the authors could expand on, and align, their approach to probably 'codebook TA' which is one of now three approaches Braun and Clarke suggest. Using constant comparison can be another technique but this is more of a grounded theory approach and could be closer to the less kind term 'mash-up' that Braun and Clarke use. So, good on transparency but just a bit more alignment to which TA type. 8/31 not clear why the numeric coding was so large CP097 - would it not be logical and readers would assume this would be from CP1 to CP15 or was there an additional nomenclature that informed this?Results - Overall, some really rich insights and quotes were often really concise but powerful. Multiple quotes were used and this could be reviewed as it did not always seem as though more than one was needed to support the thematic point being described. 9/8 'no repeat interview' not needed. 9/15-19 as per abstract comment, 4 main themes did not have any independent meaning apart from the second and had not normativity or specific additional description. The test I use is to imagine you are describing the theme to someone and consider if it is enough. So, 'what did you find?" 'lessons learnt' and would this be helpful? I know qualitative analysis can be subjective (despite coding frameworks and multiple coders!) but just felt these could have been reviewed. My own take on this was 'professional agility' ie the ability of comm pharmacy to flex!, 'primary contact importance', 'poor infrastructure' and 'important lessons for future pandemics'. Things like infrastructure appeared twice and just expressed as negative current and positive future (eg infrastructure was poor so we need to improve) and this could have been a theme on its own and combined these; the fourth theme was not dissimilar to the third in many ways and would not lessons learnt inform future planning and this is noted (16/4)? 10/23 HSR audience may be ok but enumerating themes is not a traditionally accepted practice I'd argue. 9/56 repeats flexibility and resilience. 10/26 'keep calm and carry on' an odd idiom to use (remove?) 10/34 so this is the quote of the title but even here it felt a bit muted and lost in the other data so again review if needed in the title. 10/53 'they demonstrated unwavering commitment' needed qualifying I felt and clarified how this came from the data. 11/20 did the 30 day emergency supply aspect get mentioned explicitly? If not I'd move this as it felt like contextual information for either the intro or better the discussion, or link more to what participants commented on in relation to this. 11/41 Abstract says 'primary' but 'first' is used here and consistency is needed. 13/22 wonderful 'choke a donkey' quote but might need some explanation for some readers!!!!Discussion - quite long but helpful links to the existing empirical and other literature on pharmacy and the pandemic which was missing from the intro.

VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

Prof. Ellen Schafheutle, The University of Manchester, Stopford Building, Oxford Road, Manchester

Comments to the Author:

Please note I was invited to review this qualitative paper and also a survey paper entitled “A cross-sectional questionnaire study of the experiences of community pharmacists during the early phases of

the COVID-19 pandemic: preparation, experience and response" by the same authors. I accepted to review both papers, as I thought there may be a way to connect the two papers, particularly if both are accepted by BMJ Open.

There is clear linkage and indeed some overlap between the two papers, so one consideration might be whether the paper could not be strengthened significantly by reporting survey and interview findings alongside each other. Many of the services which are mentioned here (e.g. on page 10/11), will make more sense if they have been defined/ described as they are in the survey paper. Clear differentiation needs to be made between initiatives driven by policy (and reimbursed) and those driven from within community pharmacy (if any).

Response: We thank the reviewer for this comment. There is linkage between the two papers as they have come from a larger project. As previously outlined in the revised survey paper (and which is also now explained further in the Introduction to this paper-see page 4, para 2), a three-phase research project was undertaken in Northern Ireland (NI) to assess community pharmacy's preparedness for and response to the pandemic, using Donabedian's over-arching three-pillar model of quality of care: structure, process and outcome (now included as reference 3) Phase 1 was a documentary analysis of policy and official guidance issued over the initial stages of the pandemic. The initial questionnaire (Phase 2) was used to gather quantitative data from a geographically stratified and representative sample of community pharmacists across Northern Ireland; this was then followed by a qualitative study with a sample of community pharmacists and other key stakeholders to explore some of the lines of questioning covered within the questionnaire in more detail (Phase 3). As each study used different methodological approaches and generated unique findings, we feel that the findings should be presented separately, albeit as companion papers. Given the level of detail provided on the different pharmacy services in the questionnaire paper, we have deliberately not gone into the same level of detail in the qualitative paper to avoid unnecessary duplication/repetition. Reference is now made to the survey paper (page 4, para 2, reference 5). Moreover, the qualitative interviews did not go through all pharmacy services in the same structured and systematic way that the questionnaire did, hence, we have only referred to COVID vaccinations as a form of new service, which we believe would be readily understood by the journal's readership.

General comments

This paper reports qualitative insights from community pharmacists and relevant stakeholders, on the experiences and learning from the early response to COVID-19 in community pharmacy. This paper has great potential to make a very novel, insightful and valuable contribution, with a number of key learning points and recommendations for policy makers not only in community pharmacy but across primary care. However, much of the current discussion focusses on a summary of finding and how they confirm evidence from published studies. I will provide more detail on how I believe this paper could be significantly strengthened in my comments below, particularly under the 'discussion' heading. I recommend the authors use a theoretical framework for their study (they mention the Pharmacy Emergency Preparedness and Response Framework developed by Aruru et al.17 in the discussion, but others exist also), then integrate their findings with the wider literature, particularly more broadly across primary care and integration, to make a number of well informed recommendations to policy makers.

Response: We thank the reviewer for this comment, and will provide a later response about the use of a theoretical framework.

Introduction

The introduction is short and mainly focusses on a summary of the findings reported in the survey paper by the same authors. If the intention of this paper in particular is to use experiences during COVOD-19 related changes to practice in community pharmacy to inform learning for policy formation for community pharmacy as an integral part of a wider primary health care provision, then some of the related literature ought to be covered here (and then returned to in the discussion). This will be particularly important for the broad readership of BMJ Open.

Response: We thank the reviewer for this comment. The qualitative work took place after the questionnaire study had been completed and findings from the latter informed the content of the topic guides for both community pharmacists and stakeholders. Therefore, we feel it is important to refer to the findings of the questionnaire in the Introduction to this study. Furthermore, the qualitative study also aimed to explore the perspectives and reflections of community pharmacists on their preparedness and response to the pandemic, in addition to other stakeholders. We did not explicitly aim to inform learning for policy, although some of the findings have policy implications. A separate documentary analysis has been undetaken of policy and practice guidance issued to community pharmacy in Northern Ireland over the course of the pandemic. We are planning a separate paper on this work which will be much more policy-specific. We have revised the Introduction to broaden the scope and to explain the context of this study in relation to the wider project (page 4, paragraph 2), but as stated above, the aim of this work was not focused on learning to inform policy.

Methods
Page 5 (6 BMJ Open): PPI. Great to see involvement. Were they involved in data analysis and particularly interpretation? The same goes for the other stakeholders on the advisory board.

Response: The PPI representatives and other members of the Study Advisory Group provided input into the topic guides. One PPI representative undertook a pilot interview to test the topic guide that was developed for the stakeholders. The PPI representatives, and other members of the Study Advisory Group also suggested individuals who might be willing to take part in interviews. Members of the Group did not contribute to analysis, but initial findings were presented to them and their comments were sought. A further sentence to this effect has been added to the PPI section on page 5.

A number of publications are available, and papers have been published, which advocate for the use of a theoretical framework to investigate the pandemic response, in different countries and at macro as well as meso and micro policy level. I am wondering whether the authors have considered using such a framework, and combining deductive and inductive qualitative analysis. Much has now been published, and some of this evidence should be covered in the introduction, and could also be used for a more theory-informed approach to analysis and interpretation.

Response: We thank the reviewer for this comment. As part of the original grant application for this study, we aligned our proposed work with Donabedian's model of quality of care i.e. structure, process and outcome, and which we now refer to in the Introduction (page 4, paragraph 2). The documentary analysis which we referred to in an earlier response related to the structure element, the questionnaire study related to the process aspect (particularly changes to process within pharmacy practice in the early stages of the pandemic) and the interview study was focused on reflections and experiences which we proposed as being aligned to the outcome element of the Donabedian model. We have now referred to this model in both manuscripts for clarity. We do not feel that it would be appropriate to 'retro-fit' any other theoretical model to this study.

Results

Top of page 8/9: It is sensible not to report individual participants' characteristics, to protect anonymity. Nevertheless, it would be helpful to include a comment about the inclusion of a mix of genders, ages, and location/ type of community pharmacies.

Response: We thank the reviewer for this comment. We have now provided a sentence of text broadly reporting these characteristics in the Results (page 8, first section of the Results).

Are the comments on page 11/12, that pharmacies were accessible (as walk-in and phone calls) as health care professionals, for advice and support, when others (e.g. GPs) had closed their doors to the public – not in contradiction to the previous point that "Medicines supply was the core service that took priority during the pandemic" (top of page 9/10) Page 14/15: It is interesting to read that the focus of other stakeholders appeared to be on medicines supply alone.

Response: We do not see these comments about accessibility and medicines supply as being contradictory. Accessibility meant that supply could continue uninterrupted, while also providing other services. And for many key stakeholders, maintenance of supply was seen as critical during a very stressful time for their various constituencies.

Discussion
The discussion, at present, is mostly community pharmacy focussed and mainly cites published evidence to confirm this study's findings. However, there are some really valuable lessons which could be picked up and framed much better by drawing on policy developments across the UK and indeed internationally, and by better situating findings as relevant across primary care, and the need for much better integration. The use of a theoretical framework – used throughout the paper – would really help with this.
I will just mention a few examples here, which are noted in the results, to give ideas as to areas for recommendations:
- emergency supply – evidence exists, and services have been implemented in England at least (possibly in Scotland too), which enable the NHS funded urgent supply of medicines (following referrals from NHS111 or general practice) under the broader urgent care agenda
- electronic prescribing: again, evidence exists here to demonstrate what works and where hindrances may be when implementing such a service
- repeat dispensing and access to patients' records are similar areas of research and policy development and could be employed to better inform this discussion
- independent prescribing: are developments similar in Northern Ireland to those in the other parts of the UK, as regulated by the General Pharmaceutical Council? Again evidence exists.
- most importantly, I think the issue of lack of coordination in primary care, and the need for better integration, including electronic communication – much evidence exists here, both from England and Scotland, but also more globally (particularly English speaking).

Response: We thank the reviewer for these comments. Referring back to some of our earlier responses: our aim and focus was not about policy. It was about understanding the reflections and perspectives of community pharmacists and wider stakeholders. We have added text to this effect (Discussion, second main paragraph, page 20) recognising that there may be findings that have lessons for policy. We have adressed the issue about the theoretical framework in a previous response above.

Reviewer: 2
Dr. Richard Cooper, University of Sheffield Comments to the Author:
A really interesting and vernally well written paper which is welcome and adds to the still relatively modest empirical literature covering (community) pharmacy and the pandemic. Puts on record the

adaptations and value of community pharmacy as viewed in context of NI. Hope the comments below help but main ones are:1 - intro lacked context to existing literature which only appears in discussion and too much on linked survey paper; 2 - methods clarification on CP sampling and framework for TP but see suggestions; 3 - could themes be reviewed for more edge and normativity and consider significant overlaps which diluted the powerful messages in there and too many quotes (one is usually enough per theme/sub-theme.

Title - not sure the quote helped and usually argued to make it harder to find a paper later so perhaps reconsider?

Response: We thank the reviewer for this comment and understand the issue about locating the paper later. We have decided to retain the title as it may attract readers and we feel that it does capture the essence of the findings. However, we have been asked by the Editor to add in the setting of the study i.e. Northern Ireland, which we have done.

Abstract - clear and well balanced. Initial descriptions of the 4 themes were very HSR and only in the bracketed further description did richer and more significant detail come out but fine for this health audience.

Response: We thank the reviewer for these comments.

Introduction - 5/16-29 seemed too detailed on the parallel quant survey paper and readers need more of a broader overview (eg Costa et al and Austin et al (as covered in the discussion but also Paudyal V et al Provision of clinical pharmacy services during the COVID-19 pandemic: Experiences of pharmacists from 16 European countries. Res Social Adm Pharm. 2021 Aug;17(8):1507-1517. doi: 10.1016/j.sapharm.2020.11.017. Epub 2020 Nov 30).

Response: We thank the reviewer for these comments. As outlined to Reviewer 1, the qualitative work took place after the questionnaire study had been completed and findings from the latter informed the content of the topic guides for both community pharmacists and stakeholders. Therefore, we feel it is important to refer to the findings of the questionnaire in the Introduction to this study. However, we have now broadened the scope of the Introduction, to provide some further context about this study and where it fitted into the larger community pharmacy project (page 4, para 2).

Methods - good detail and clear and transparent. PPI good to note.

Response: We thank the reviewer for these comments.

7/10 reference to randomising if more than 20 was very unusual for qualitative does this mean there was no attempt to be purposive? Also, theoretical/data saturation is mentioned but this would not be done with a pre-determined quota and this would benefit from clarification. It might be good to then refer to it as quota (ie a form of convenience and not purposive) sampling and remove saturation. The stakeholder section did refer to convenience but actually seemed more purposive in being more transparent about where stakeholders were identified.

Response: We thank the reviewer for these comments. We have revised our description of the sampling and recruitment of pharmacists (Page 6, para 2) as randomisation was not undertaken as the approach was not needed. When undertaking the telephone questionnaire, pharmacists were asked if they would be interested in taking part in a follow-up interview. The numbers of expressions of interest were quite high and we thought that randomisation would be one way of dealing with this issue. However, when pharmacists were approached to be formally invited, the numbers were much

less than anticipated. The projected number of 15-20 was based on other studies in which saturation was achieved having interviewed this number of participants.

The analysis section would benefit from clarification also in relation to using a coding framework. Braun and Clarke's original 6 stage thematic analysis did not embrace this but the later 2019 paper gives more of a range and perhaps the authors could expand on, and align, their approach to probably 'codebook TA' which is one of now three approaches Braun and Clarke suggest. Using constant comparison can be another technique but this is more of a grounded theory approach and could be closer to the less kind term 'mash-up' that Braun and Clarke use. So, good on transparency but just a bit more alignment to which TA type.

Response: We thank the reviewer for these comments. We did cite the Braun and Clarke 2019 reference (see reference 14). We have revised the analysis section in order to clarify our approach which we agree is closer to the 'codebook thematic analysis' as described in the 2019 publication (page 7/8).

8/31 not clear why the numeric coding was so large CP097 - would it not be logical and readers would assume this would be from CP1 to CP15 or was there an additional nomenclature that informed this?

Response: We thank the reviewer for this comment. The numeric coding used for pharmacists refers to the respondent number from the questionnaire study which preceded the interviews. We retained this numeric coding for ease of reference across the two datasets. We have now added a line of text to explain this in the method (page 7).

Results - Overall, some really rich insights and quotes were often really concise but powerful. Multiple quotes were used and this could be reviewed as it did not always seem as though more than one was needed to support the thematic point being described.

Response: We thank the reviewer for this comment. We have reduced the number of quotes as suggested by the reviewer.

9/8 'no repeat interview' not needed.

Response: We have removed this sentence.

9/15-19 as per abstract comment, 4 main themes did not have any independent meaning apart from the second and had not normativity or specific additional description. The test I use is to imagine you are describing the theme to someone and consider if it is enough. So, 'what did you find?" 'lessons learnt' and would this be helpful? I know qualitative analysis can be subjective (despite coding frameworks and multiple coders!) but just felt these could have been reviewed. My own take on this was 'professional agility' ie the ability of comm pharmacy to flex!, 'primary contact importance', 'poor infrastructure' and 'important lessons for future pandemics'. Things like infrastructure appeared twice and just expressed as negative current and positive future (eg infrastructure was poor so we need to improve) and this could have been a theme on its own and combined these; the fourth theme was not dissimilar to the third in many ways and would not lessons learnt inform future planning and this is noted (16/4)? 10/23 HSR audience may be ok but enumerating themes is not a traditionally accepted practice I'd argue. 9/56 repeats flexibility and resilience. 10/26 'keep calm and carry on' an odd idiom to use (remove?) 10/34 so this is the quote of the title but even here it felt a bit muted and lost in the other data so again review if needed in the title. 10/53 'they demonstrated unwavering commitment' needed qualifying I felt and clarified how this came from the data. 11/20 did the 30 day emergency supply aspect get mentioned explicitly? If not I'd move this as it felt like contextual information for

either the intro or better the discussion, or link more to what participants commented on in relation to this. 11/41 Abstract says 'primary' but 'first' is used here and consistency is needed. 13/22 wonderful 'choke a donkey' quote but might need some explanation for some readers!!!!

Response: We thank the reviewer for these detailed comments. We have discussed them extensively within the research team. We had gone through several iterations of descriptors to try and distil and synthesise the data in a meaningful way. As the reviewer correctly points out, qualitative data and analysis are somewhat subjective. We would argue that what we have produced does illustrate the reflections and experiences of the participants. We feel that there is coherence and flow in the way that we have presented the findings. Although some aspects may appear under different themes, these reflect the context of what was being discussed eg infrastructure was important for both lessons learned (infrastructure is poor) and planning for the future (infrastructure will need to be addressed in the future), with the former feeding into the latter. We have reduced the number of quotes or truncated some of the text, removed the 'keep calm and carry on' comment (although it did describe how pharmacists dealt with the situation), and the word 'unwavering'. We have retained the comment about the 30-day emergency supply as it was explicitly mentioned and it also provides context for the reader. We have addressed the issue about primary vs. 'first'. And although we thought it was self-explanatory, we have removed the donkey quote!

Discussion - quite long but helpful links to the existing empirical and other literature on pharmacy and the pandemic which was missing from the intro.

Response: We thank the reviewer for this comment. The Discussion has undergone some revision based on the comments from Reviewer 1.