Author’s response to reviews

Title: Over prescribing of antibiotics for Acute Respiratory Tract Infections; A qualitative study to explore Irish general practitioners’ perspectives

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Author’s response to reviews:

Dear Dr. Aronin,

We are very grateful for the reviewers’ comments and for the opportunity to revise and resubmit our paper. We will address each reviewer’s comment specifically and outline how the manuscript has been edited using Author/Reviewer.

Editor Comments: COREQ guidelines

In accordance with BioMed Central editorial policies (http://www.biomedcentral.com/submissions/editorial-policies#standards+of+reporting), could you please ensure your manuscript reporting adheres to COREQ guidelines (http://intqhc.oxfordjournals.org/content/19/6/349.long) for reporting qualitative studies. This is so your methodology can be fully evaluated and utilized. Can you please include a completed COREQ checklist as an additional file when submitting your revised manuscript.

Author: The COREQ checklist has been completed and submitted as an additional file
Reviewer reports:

Samah Alageel (Reviewer 1): This is a well-written paper which I feel needs clarity in a few places. Please see comments below.

Reviewer: In the abstract: Methods: please clearly identify the study design and analysis method.

Author: On line 67-71, it now reads: “We used an explorative qualitative study design. Thirteen GPs were recruited through purposive sampling to represent urban and rural settings and years of experience. They were based in general practices within the Mid-West of Ireland. GPs took part in semi-structured interviews that were digitally audio recorded and transcribed”.

Reviewer: Results: Please provide some description of the themes.

Author: On line 73-76, the results of the abstract now reads: “Themes include (1) non-comprehensive guidelines; how guideline adherence can be difficult, (2) GPs under pressure; pressures to prescribe from patients and perceived patient expectations and (3) Unnecessary prescribing: how to address it and the potential of public interventions to reduce it”.

Reviewer: In the background: Please make sure you define all the abbreviations, for example: UK and EU.

Author: On line 119, it now reads: United Kingdom (UK) and on line 125, includes: European Union (EU)

Reviewer: Provide a rationale for specifying OOH services

Author: The sampling strategy was aimed at recruiting GPs who are affiliated to University of Limerick. It was by chance that all participants in the study worked in OOH settings as well. Since we do not expect all potential readers of the article to be familiar with the Irish OOH setting, we decided to describe OOH in the Irish context.

Reviewer: Methods: Please specify the study design

Author: On line 164-165, it now reads: “An explorative qualitative study design and purposive sampling was used for participant recruitment of 13 GPs [22]”.
Reviewer: In the data collection section: can you provide numbers to supplementary materials? and make sure it is the same number as the ones attached to the manuscript, as now I have supplementary material 1 and 3.

Author: Supplementary materials have been revised and renamed for clarification. On line 185-188, it now reads: “The research assistant used an interview guide that was designed by two GP researchers (ROC, AOR), one social care researcher (JOD) and one public health researcher (SJP) (See Supplementary Material A)”.

On line 194-197, it now reads: “The interviewees were given time to read the consent form and any resulting queries were answered by the interviewer. They were then given the opportunity to provide their informed consent by signing the consent form (See Supplementary Material B)”.

On line 205-212, it now reads “The initial codes were developed by JOD, ROC and LFWL through reviewing the interviews and identifying similar codes among them. Following this, five of the researchers (SJP, AOR, LFWL, JOD, ROC) met to review and further analyse the codes. Similar codes were grouped together to develop themes. Themes were further reviewed by one author (CD) and all authors collaborated to define and name the themes and subthemes. Three authors then worked to produce the report (JOD, ROC, SJP). Throughout the analysis stage, codes and themes were defined, combined, refined and recoded in line with Braun and Clarke [23](See Supplementary Material C). Supplementary Material C outlines the coding process”.

Reviewer: Add the ethical approval details in the "Ethical considerations" section.

Author: In the ethical consideration section, on line 220-221 now reads “Ethical approval for this study was granted by from the University Hospital Limerick Research Ethics Committee (Number: 068/17)”.

Reviewer: Results:

The authors have clearly identified themes and description of themes, but I wondered if you could add more quotes to support your results and improve transparency.

Further quotes have been added to the results section to support results and improve transparency.
Author: On line 250-252, it states: “There was a study done when I was in paeds training – GP’s were not prescribing early enough in chest infections in children and they ended up being admitted with pneumonia because they weren’t getting antibiotics” (GP 6)

On line 270-272, it states: “Sometimes with private patients they feel that because they are paying you a fee, they should be getting a prescription and that it should be a prescription for as they call it “a strong antibiotic” (GP 3)

On line 297-298, it reads: “Then you have another cohort and all they want is an antibiotic and that is what they are used to getting and they are a lot more challenging” (GP 8)

On line 325-327, it reads: “I think sometimes the compromise there is the deferred script but you say “I don’t think you need to go on something right away. Hold off, there is a prescription for [name of an antibiotic], three times daily for 5 days but I would be hoping you don’t need to fill it” (GP 3)

On line 328-329, it reads: “But if it is an upper respiratory that probably looks viral but could deteriorate but coming up towards the end of the week, I would probably give them a deferred script” (GP 13)

On line, 340-342, it now reads: “If there was something in your practice management system that you could switch on that tracked your prescribing habits and gave an automatic read out every month in relation to what you prescribed and then compared it” (GP 7)

On line 353-356, it states: “Just watching my own nurses. If they say it to them, you know, I don’t…”we’ll see what the doctor says but I don’t think he needs the antibiotic” then you are beginning to push an open door now as distinct from starting from scratch and I think there might be a role for that” (GP 5)

On line 369-370, it states: “A lot of patients coming in with Doc McStuffin dolls and at least we can check their ears and throats now. Yeah so little things like that would be good” (GP13)

Reviewer: In page 12 lines 248-251: the sentence "This raises ethical challenge ..." seems to be the authors' discussion of the results, if this was reflected by the interviewees then please make this clear, otherwise this could be a discussion point.

Author: This has been reviewed in the discussion section and has been added to the point being made about ethics and GPs’ professionalism. On line 426-429, it now reads: “There is the ethical question for GPs; should they let the pressure to prescribe for private patients overshadow their own professionalism and GPs find it difficult to let a private patient leave the consultation without a prescription for an antibiotic because they are paying a fee”.
Reviewer: Discussion: In Page 17 lines 359-360: the sentence "Some interviewees felt .... " was not mentioned in the results section.

It might be helpful to present patients’ views about antibiotic prescribing in primary care and discussing whether or not it is consistent with GPs fears.

Author: This sentence has been removed as it was not discussed in the results section. This paper focuses on GPs’ experiences rather than patients’ views of antibiotics prescribing in primary care so the results section has been structured in line with this.

Reviewer: Strengths and limitations: Discussing how the views of those GPs who did not agree to take part in the study might differ.

Author: This has been reviewed and further insights given on line 507-510 where it now states: “GPs who did not take part in this study may have different views about prescribing antibiotics, the usefulness of guidelines in trying to reduce AMR and whether perceived patient expectation influences their prescribing of antibiotics”.

Reviewer 2 (Reviewer 2): PEER REVIEWER COMMENTS: To view the full report from the academic peer reviewer, please see the attached file.

REVIEWER COMMENTS FROM REPORT: Interesting topic; however, one that has been the subject of considerable research. This will make it difficult to publish. Need to make sure this is distinguished from other work in the literature on this topic to be clear how this adds. In general, the authors have done a good job describing the general need for this study, and the objective. In addition, there are clear methods. Where I had trouble with this paper is the description of the findings, which do not appear to describe new insights that are not widely known.

Reviewer: REQUESTED REVISIONS:

Need to better describe the need for this current study, and what is unknown in the literature that this study seeks to answer

Author: This has been revised to describe the need for this study. On line 125-134, it reads: “Thus explorative studies are required to understand GPs’ challenges in avoiding unnecessary prescription of antibiotics for ARTI. The most recent qualitative study in Ireland by Fleming et al found that antibiotic prescribing is strongly influenced by the context of healthcare delivery and
that the lack of implementation of guidelines and knowledge regarding antibiotic prescribing patterns are significant challenges that need to be addressed [19]. The aim of this paper, therefore, is to investigate why GPs in Ireland continue to prescribe antibiotics for ARTI, despite widely publicised guidelines and evidence of their ineffectiveness [20].

Reviewer: Abstract does not provide sufficient detail to let a reader understand the results (only describes high-level themes),

Author: The abstract has been amended to give readers more understanding of the study. On line 67-71, it now reads: We used an explorative qualitative study design. Thirteen GPs were recruited through purposive sampling to represent urban and rural settings and years of experience. They were based in general practices within the Mid-West of Ireland. GPs took part in semi-structured interviews that were digitally audio recorded and transcribed.

On line 73-76, it reads: “Themes include (1) non-comprehensive guidelines; how guideline adherence can be difficult, (2) GPs under pressure; pressures to prescribe from patients and perceived patient expectations and (3) Unnecessary prescribing: how to address it and the potential of public interventions to reduce it”.

Reviewer: Conclusions of the abstract are too editorialized, should describe findings, then don't go beyond that.

Author: The conclusion of the abstract has been amended to describe the findings. On line 78-82, it now reads: “GPs acknowledge their failure to implement guidelines because they feel they are less usable in clinical situations. GPs felt pressurised to prescribe, especially for fee-paying patients and in out of hours settings (OOH), suggesting the need for interventions that target the public’s perceptions of antibiotics. GPs behaviours surrounding prescribing antibiotics need to change in order to reduce AMR and change patients’ expectations”.

Reviewer: The recruitment strategy needs to be better described, specifically the list of possible people who were contacted.

Author: On line 167-171, it now reads: “All of the invited GPs agreed to participate in the study. Data analysis was carried out simultaneously by JOD and LWFL. In consultation with the research team JOD and LWFL came to the conclusion that data saturation has occurred because similar themes started to appear and chances of new themes to appear in subsequent interviews was judged to be minimal. Therefore no further participants were recruited”.
Reviewer: Need more details on the methods to how the coding was done and how we should be certain this was done correctly

Author: This has been rephrased and redefined. On line 205-212, it now reads: “The initial codes were developed by JOD, ROC and LFWL through reviewing the interviews and identifying similar codes among them. Following this, five of the researchers (SJP, AOR, LFWL, JOD, ROC) met to review and further analyse the codes. Similar codes were grouped together to develop themes. Themes were further reviewed by one author (CD) and all authors collaborated to define and name the themes and subthemes. Three authors then worked to produce the report (JOD, ROC, SJP). Throughout the analysis stage, codes and themes were defined, combined, refined and recoded in line with Braun and Clarke [23](See Supplementary Material C). Supplementary Material C outlines the coding process”.

Reviewer: The results section is thin, need to add more quotes or create a table of them.

Further quotes have been added to the results section to support results and improve transparency.

Author: On line 250-252, it states: “There was a study done when I was in paeds training – GP’s were not prescribing early enough in chest infections in children and they ended up being admitted with pneumonia because they weren’t getting antibiotics” (GP 6)

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On line 369-370, it states: “A lot of patients coming in with Doc McStuffin dolls and at least we can check their ears and throats now. Yeah so little things like that would be good” (GP13)

Reviewer: In the discussion the literature is described but not really how this study fits in and adds (or doesn't?)

The discussion section has been reviewed and amended to ensure existing literature is discussed and how this study fits in with other work.

Author: Line 410-418 reads “Patterns of antibiotic prescribing that clearly do not adhere to guidelines have been reported in the OOH setting [31, 32]. However, the higher OOH prescribing rates could be at least partly explained by a different population of presenting patients [33]. In Norway, antibiotic prescribing for ARTIs in OOH services was at a similar level to that of normal working hours [34]. It has been suggested that this is because doctors working in OOH units are more adherent to guidelines than doctors working in regular general practice, although rates of antibiotic prescribing increased during busy sessions [34]. It must be acknowledged therefore that the OOH clinical setting is a different and the usual rules may not apply. Guidelines and interventions to reduce antibiotic prescribing should reflect this”.

On line 451-452, it now reads: “Mass media campaigns have also been shown to work to reduce prescribing of antibiotics [45]”.

On line 475-480, it reads: “GPs outlined that limited durations of consultations were a factor in their decision to prescribe antibiotics. Training GPs to communicate more effectively and efficiently with their patients may enable them to be more confident, change their prescribing behaviours and reduce antibiotic prescribing. One study [56] showed internet based training on enhanced communication skills lowered antibiotic prescribing rates”.
On line 501-502, it reads: “It also compliments existing papers on AMR and prescribing of antibiotics for ARTI”.

In the conclusion, on line 520-521, it reads: “GPs should also be more aware how to change learned behaviours when prescribing antibiotics for patients with ARTI”.

ADDITIONAL REQUESTS/SUGGESTIONS:

No

We thank you for your time with this manuscript hope that it will be published in your journal.

Thanking you,

On behalf of the research team,

Jane O’Doherty