Reviewer's report

Title: The Viral Prescription Pad - A Mixed Methods Study to Determine the Need for and Utility of an Educational Tool for Antimicrobial Stewardship in Primary Health Care

Version: 0 Date: 05 Nov 2019

Reviewer: Catherine Woods

Reviewer's report:

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Overall: I think the idea for this research is novel and interesting, and 'prescription pads' could be a way for healthcare practitioners to feel more authoritative in their decisions not prescribe antibiotics as it involves giving the patient something tangible to take away with them (similar to a prescription). However, I think your manuscript needs revising and based around overall aims and objectives and core findings, rather than the findings from each individual study. I also think you need to situate your work in other research about antimicrobial stewardship programs, particularly patient information booklets, because there is a synergy in terms of improving patient education about antibiotics to reduce unnecessary prescribing and re-consultation.

The following comments/questions arose from reading your manuscript which may help with the revision.

Abstract: the abstract is a little vague and needs reworking. It is not clear from your rationale (there is a lack of data regarding the integration of antimicrobial stewardship programs (ASP) in non-hospital settings) what the aim of this research is. You should state that the focus is on the treatment of URTI so the reader knows the infection you are referring to straight away.

Background: There is a large body of research about antimicrobial stewardship programs that you could have drawn upon in your background section but you have not. While they may not directly apply to this setting, they are still relevant to show the range of existing programs and situate where this research lies. I would draw upon research that has explored the use of patient booklets as this sits most closely with your research and the 'prescription pad'.

You refer to 'antimicrobial stewardship programs' and then you refer to 'the ASP in Regina, Saskatchewan, Canada'. Are you referring a specific program or an organisation? It is a little confusing to read.

Methods: need to be a lot clearer, across all three sections.

You need to add a reference for "sequential explanatory design" and explain your rationale for using it.

Your sampling strategy needs explaining rather than just listing the departments the survey was sent to.
Why was the survey only open for eight weeks? Similar to previous comments, your scientific justification for these parameters needs explaining.

How was the survey developed and who was involved? Was it pilot tested? How did you ensure the questions were relevant for each different profession?

Why were veterinarians included? Likely ASP in this context (animals) very different compared to humans.

How exactly was the viral prescription pad developed (content/design/wording)? It is unclear from your background if this was developed before your research and you evaluated it; or if it was developed during this research after the survey.

Related to the above, did you have any patient and public (PPI) involvement in developing the prescription pad?

Interviews

Why did the interviews take place 12 - 18 months after the viral pad was implemented? Did it undergo any other forms of evaluation during this time (i.e. to ensure practitioners were using it)? I am a little concerned about validity here, some practitioners might have used the pad initially and then stopped, and if interviewed 12 months later, they might not remember why they stopped or occasions when they used it.

Why did you only interview 12 practitioners?

Your statement, "This allowed interviewees to freely express their feelings and perspectives in a one-on-one setting", is too strong and should be revised. Did the researcher say they were impartial to the development of the pad at the start of the interview? If so, this needs to be reported.

You need to add a reference to the type of thematic analysis you used.

The process of analysing the data between the different team members needs describing in more detail.

Did you achieve data saturation based on 12 physicians? A reference for data saturation needs to be added.

You could have split the methods section into 'quantitative' and qualitative analysis' and have sections under each of these about 'approaching participants, 'sample', 'ethics', etc. It might make the methods section clearer and more streamlined.

I would change your use of 'sex' to 'gender' throughout. I would also change 'respondent' to 'participant'.

Which ethics committee approved this research?

Public survey

Why did you use a hypothetical scenario for the public attitudes survey rather than recruiting patients who had recently had a URTI?
Results

The results section does not have a clear thread. You oscillate between the findings of each individual study rather than pulling them together and relating them to your overall aims and objectives. I would consider rewriting this section with the latter in mind. It may be that you are trying to cover too much within one paper so a more streamlined approach focussing on core findings across all three studies (rather than all of them) might be more appropriate.

Discussion

As per comment above, the discussion needs streamlining based on the overall findings and how they tie together rather than the specifics of each individual study.

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.

Yes

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.

I am able to assess the statistics

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