

PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (<http://bmjopen.bmj.com/site/about/resources/checklist.pdf>) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

TITLE (PROVISIONAL)	Antibiotic prescribing in Long Term Care Facilities; a qualitative, multidisciplinary investigation.
AUTHORS	Fleming, Aoife; Bradley, Colin; Cullinan, Shane; Byrne, Stephen

VERSION 1 - REVIEW

REVIEWER	Nick Daneman Sunnybrook Health Sciences Centre, University of Toronto, Canada
REVIEW RETURNED	04-Sep-2014

GENERAL COMMENTS	<p>I do not have expertise in qualitative methodology, so would suggest that BMJ Open also send to other peer reviewer(s) with this expertise.</p> <p>Antimicrobial stewardship in long term care facilities is an important but understudied field.</p> <p>The existence of a problem has been well demonstrated by quantitative methods, but qualitative studies are much needed to shed light on the root causes of antimicrobial misuse, and to identify interventions.</p> <p>The study describes a qualitative interview-based analysis of antibiotic prescribing in Irish long term care facilities. Interviews were conducted with 37 multi-disciplinary healthcare workers, until a saturation of concepts was achieved.</p> <p>The results were analyzed using the Theoretical Domains Framework, and Capability, Opportunity, Motivation - Behaviour model.</p> <p>I don't have a lot of experience with these approaches, but I found the results fascinating, and I think they will be of interest to BMJ Open's readership.</p> <p>Comments:</p> <p>1)The multi-disciplinary interviews across professions is a big strength. I would have also liked to have seen interviews of LTCF residents and their families, as well as possibly members of LTCF leadership/administration. This is probably beyond the scope of this study, but should be mentioned in limitations and future research.</p> <p>2)The COM-B behavioural change wheel was helpful, but should there also be a figure or table to describe the TDF domains earlier on in the paper? As someone not familiar with the TDF, I think this might have been helpful so that I could anticipate the flow of subsections.</p> <p>3)Table 3 is one of the most important features of the paper because it maps potential interventions to the study findings by applying the</p>
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	<p>theoretical frameworks. I wonder if it might be helpful to reduce text in some of the other sections, to allow more text related to describing these results? It may also be easier to follow if acronyms/initials replaced with full names of domains.</p> <p>4) In addition to highlighting what interventions have greatest theoretical potential of working, would it be helpful also to highlight types of interventions that you think are unlikely to work based on the findings and TDF framework?</p>
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REVIEWER	António Teixeira Rodrigues Center for Cell Biology, University of Aveiro, Portugal. Faculty of Pharmacy, University of Coimbra, Portugal.
REVIEW RETURNED	14-Sep-2014

GENERAL COMMENTS	<p>Some comments about the manuscript:</p> <p>1- This is a very interesting but extensive manuscript. Consider to diminish the introduction or the results section or create a supplementary file with the transcripts.</p> <p>2- INTRODUCTION: Please consider to quit figure 1 from the introduction opting to describe it as in lines 29-36, page 15 of the results section.</p> <p>3- METHODS: Do you have informed consents from the participants to record and transcribe their interviews? And authorization from the National Data Protection Authority?</p> <p>4- METHODS/ Page 6, line 17 to 19: The validation of the topic guide is poor. This is a limitation and you must refer it in the limitations/ discussion section.</p> <p>5- METHODS/ Page 7, line 3 and 4: the interviews range presented in the methods section must be presented in the starting of the results section. In methods, if you have that information, you can present the range obtained in the pilot study.</p> <p>6- RESULTS/ Page 8, table 2: In the caption you write "Table A" and it must be "Table 2"</p> <p>7- RESULTS/ Page 8, table 2: What's the difference between "20+" and ">20"? Sometimes you use different symbols but I think they means the same, as in the example "+20" and ">20".</p> <p>8- RESULTS/ Page 15, line 29-36: and mentioned before, this description of the model must substitute the figure in the introduction section.</p> <p>9- DISCUSSION: Why some interviews take just 10 minutes and others 35 minutes? Could this affect the results obtained because one specific group participated more?</p> <p>10- DISCUSSION: Please revise the limitations introducing also the convenience selected and small sample size.</p>
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VERSION 1 – AUTHOR RESPONSE

Reviewer 1 comments:

1. We acknowledge that interviewing LTCF residents and administrators may have been interesting but we do not believe it is necessary to add this as a study limitation as we wanted to interview those directly involved in antibiotic prescribing and usage in the clinical setting. As the paper has many recommendations regarding AMS we are reluctant to provide further recommendations for future research.
2. A Table to explain in further detail the TDF has been inserted (Table 1). We appreciate the need to explain this further.
3. Table 4 outlines the TDF, COM-B and Intervention functions and the annotations for the TDF

domains have been replaced by the full text to ensure ease of understanding. These intervention functions are proposed based on the authors identification of the most effective strategies to address the gaps identified by the TDF in the interviews. We feel that the intervention functions are self-explanatory and that it is outside the scope of this paper to discuss this further.

4. As with point 3, it is outside the scope of this paper to make recommendations or causal statements about what type of interventions will work best or not. The necessity to adapt and tailor interventions to meet the local needs/acceptability/feasibility has been reinforced throughout the results and discussion.

Reviewer 2 comments:

1. The authors are all of the opinion that in order to fully explain the TDF, COM-B and present in detail these qualitative interview findings the word count should not be reduced.

2. In order to fully and clearly explain the COM-B model and how it links to intervention functions the Figure 1 is necessary. This Figure facilitates the interpretation of Table 4 which links the TDF to the COM-B and subsequent AMS strategies with intervention functions.

3. Written, informed consent was obtained from all participants to conduct and audio record the interviews and this was outlined in the Methods section 'Topic guide and interviewing'.

4. The validation of the interview topic guides is not a process that the authors believe is required to conduct semi-structured interviews. By their definition these interviews allow for the exploration of emergent issues during the interview process and should not be restricted to only the topic guide. We have reviewed and searched other qualitative studies undertaking semi-structured interviews and topic guide validation has not been reported. This is not a requirement in the COREQ guidelines.

5. The range of interview lengths has been moved from the methods section to the results section.

6. Table 3 has been labelled accordingly.

7. The detail within Table 3 has been standardised in terms of presentation of years of experience etc.

8. As outlined above the authors feel that Figure 1 is necessary to outline the frameworks clearly.

9. The interview duration varied across all groups and it was not the case that one specific group had longer or shorter interviews.

10. The sampling strategy has already been addressed as we acknowledge that all participants are from the same greater geographical region. The sample size is not small at 37 interviews; data saturation was reached within each health care professional group with two extra interviews conducted to ensure that no new themes were missed. This is all presented clearly in the methods section.

VERSION 2 – REVIEW

REVIEWER	Nick Daneman Sunnybrook Health Sciences Centre, University of Toronto
REVIEW RETURNED	15-Oct-2014

GENERAL COMMENTS	The authors have satisfactorily addressed my previous comments
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REVIEWER	Antonio Teixeira Rodrigues Centre for Cell Biology, University of Aveiro, Portugal. Faculty of Pharmacy, University of Coimbra, Portugal.
REVIEW RETURNED	15-Oct-2014

GENERAL COMMENTS	The manuscript quality is high and the authors revealed interesting explanations about the main doubts/ limitations presented by the reviewers.
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