SUPPLEMENTARY DATA

TITLE:

What influences the implementation and sustainability of antibiotic stewardship programmes in hospitals? A qualitative study of antibiotic pharmacists' perspectives across South West England

Monmaturapoj T, *et al. Eur J Hosp Pharm* 2022; 29:e46–e51. doi: 10.1136/ejhpharm-2020-002540

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Interview Topic Guide

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The following questions were used as a topic guide during the interviews with the pharmacists. As part of introduction, the pharmacists were reminded regarding the research aim and to express their views freely as there is no right or wrong answer. A consent form including permission to record the interview was obtained before the interview commenced. The pharmacists who chose to be interviewed by telephone, a consent form was sent by post with a reply-paid envelop.

❍ **Introduction and welcome**

❍ **Questions**

1. Please tell me about your role or involvement in the ASPs in your hospital.

2. Please tell me about the current operation of the ASPs in your hospital.

(“As you may have heard that hospitals in some countries still face challenges with the implementation of ASPs.”)

3. In your experience, what are the barriers and facilitators that influence the implementation of the ASPs in your hospital?
    - And why?

(“When ASPs have already been in place, maintenance of successful ASPs is also important but it can be challenging in many hospitals.”)

4. So far, what are the barriers and facilitators that influence the sustainability of the ASPs in your hospital?
    - And why?

5. In your views, please tell me about what can be improved around the ASPs in your hospital?
    - And why?

6. Are there any relevant issues to the topic that I haven’t covered and you would like to mention?

7. Do you have any questions for me?

❍ **Thank you for participating and closure**

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Consolidated criteria for reporting qualitative research (COREQ) 32-item checklist

	Guide questions/description	Comment	Location in the manuscript (section)
Domain 1: Research team and reflexivity			
Personal Characteristics			
1. Interviewer/ facilitator	Which author/s conducted the interview or focus group?	Teerapong Monmaturapoj (TM) conducted the interviews.	Methods (*Data collection)*
2. Credentials	What were the researcher's credentials? E.g. PhD, MD	TM obtained bachelor degree in Pharmacy and master degree in Clinical Pharmacy.	N/A
3. Occupation	What was their occupation at the time of the study?	TM is a PhD student at Department of Pharmacy and Pharmacology, The University of Bath.	N/A
4. Gender	Was the researcher male or female?	Male	N/A
5. Experience and training	What experience or training did the researcher have?	TM had undertaken several courses related to advanced qualitative health research before the study was conducted. The other authors have extensive experience in qualitative health research.	N/A
Relationship with participants			
6. Relationship established	Was a relationship established prior to study commencement?	TM had no relationships with participants prior to the study.	N/A
7. Participant knowledge of the interviewer	What did the participants know about the researcher? e.g. personal goals, reasons for doing the research	TM attended the South West Antibiotic Pharmacy (SWAP) group meeting and presented details of the study to attendees who were then invited to participate if: they were hospital antibiotic pharmacist, they had been involved in ASP implementation, and their hospital had an antibiotic or ASP policy in place. Prior the interviews, TM introduced himself again to eligible participants stating he is a PhD student, etc. as well as describing the purpose of the	Methods (*Participants and recruitment)*

		project and answering any questions that participants may have had about the project.	
8. Interviewer characteristics	What characteristics were reported about the interviewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic	TM is a clinical pharmacist and his research interests lie in infectious diseases, antibiotic resistance, and antibiotic utilization. TM has a special interest in antibiotic stewardship as it helps optimize antibiotic use and thus address antibiotic resistance.	N/A
Domain 2: Study design			
Theoretical framework			
9. Methodological orientation and Theory	What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis	A reflexive thematic analysis using inductive and deductive approaches.	Methods *(Analysis)*
Participant selection			
10. Sampling	How were participants selected? e.g. purposive, convenience, consecutive, snowball	TM recruited participants through their professional group of the South West Antibiotic Pharmacy.	Methods (*Participants and recruitment)*
11. Method of approach	How were participants approached? e.g. face-to-face, telephone, mail, email	TM attended the South West Antibiotic Pharmacy Group meeting and presented details of the study to attendees who were then invited to participate if: they were hospital antibiotic pharmacist, they had been involved in ASP implementation, and their hospital had an antibiotic or ASP policy in place. A study information sheet was emailed to these individuals who agreed to take part.	Methods (*Participants and recruitment)*
12. Sample size	How many participants were in the study?	Thirteen	Results

13. Non-participation	How many people refused to participate or dropped out? Reasons?	Following the presentation and discussion of the study in the meeting, all eligible participants (n=13) from 13 individual hospitals across South West England agreed to participate. During data collection (interviews), there were no eligible participants who refused to participate or withdrew interview data from the study. Thirteen interviews were completed with all specialist hospital antibiotic pharmacists who were members of the South West Antibiotic Pharmacy Group.	Methods (*Participants and recruitment)* & Results
Setting			
14. Setting of data collection	Where was the data collected? e.g. home, clinic, workplace	Participants could determine whether they preferred to be interviewed face-to-face or by telephone. All face-to-face interviews took place in non-clinical professional area.	Methods *(Data collection)*
15. Presence of non-participants	Was anyone else present besides the participants and researchers?	No	N/A
16. Description of sample	What are the important characteristics of the sample? e.g. demographic data, date	Fully presented in results section	Results
Data collection			
17. Interview guide	Were questions, prompts, guides provided by the authors? Was it pilot tested?	Yes, the research team developed a semi-structured topic guide which was then piloted with two non-participating hospital antibiotic pharmacists. TM used a semi-structured topic guide to facilitate the interviews, however questions may vary depending on participants' response.	Methods *(Data collection)* & Supplementary file

18. Repeat interviews	Were repeat interviews carried out? If yes, how many?	No	N/A
19. Audio/visual recording	Did the research use audio or visual recording to collect the data?	All interviews were audio-recorded (with permission) and later transcribed.	Methods *(Data collection)*
20. Field notes	Were field notes made during and/or after the interview or focus group?	Yes, TM wrote brief field notes after each interview regarding the nature of the interview and his perceptions of participant's responses.	N/A
21. Duration	What was the duration of the interviews or focus group?	Interview times varied but were generally around 60 minutes.	Results
22. Data saturation	Was data saturation discussed?	Details and method of sample size determination were fully described in method section.	Methods *(Data collection)*
23. Transcripts returned	Were transcripts returned to participants for comment and/or correction?	No	N/A
Domain 3: Analysis and findings			
Data analysis			
24. Number of data coders	How many data coders coded the data?	Three independent coders (TM, JS, and MW) reviewed and coded the first transcript. Similarities and differences in coding were discussed and the initial coding framework was agreed for single coding (by TM) of the remaining transcripts. The development and refinement of codes within the coding framework was regularly discussed by the research team until the end of the coding process.	Methods *(Analysis)*
25. Description of the coding tree	Did authors provide a description of the coding tree?	Each code had description within the software. The description of each potential theme and sub-theme was	Methods *(Analysis)*

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		also defined to help draw out and finalize main themes and sub-themes.	
26. Derivation of themes	Were themes identified in advance or derived from the data?	This study used inductive and deductive approaches. The codes and the themes were informed by literature and interview content.	Methods *(Analysis)*
27. Software	What software, if applicable, was used to manage the data?	Nvivo12® software was used.	Methods *(Analysis)*
28. Participant checking	Did participants provide feedback on the findings?	No	N/A
Reporting			
29. Quotations presented	Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g. participant number	Yes, quotations were presented and identified in a manner protecting participant confidentiality.	Results
30. Data and findings consistent	Was there consistency between the data presented and the findings?	Yes, there was consistency between the data and the findings.	Results
31. Clarity of major themes	Were major themes clearly presented in the findings?	Yes, major themes were clearly identified.	Results
32. Clarity of minor themes	Is there a description of diverse cases or discussion of minor themes?	Yes, minor themes were clearly identified and related to major themes.	Results

N/A; not applicable

Tong A, Sainsbury P, and Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Health Care* 2007;19:349–57.