Author’s response to reviews

Title: Role of professional networks on social media in addressing clinical questions at general practice: a cross-sectional study of general practitioners in Australia and New Zealand

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Version: 1 Date: 08 Feb 2019

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29th January 2019

Dear Dr Tovah Honor Aronin,

We are grateful for your consideration of our manuscript (FAMP-D-18-00414) entitled ‘Role of professional networks on social media in addressing clinical questions at general practice: a cross-sectional study of general practitioners in Australia and New Zealand’ for consideration in the research articles section of the BMC Family Practice.

My co-authors and I greatly appreciate the time and effort that you, the editors and the reviewer put into the review of our manuscript. We have revised our manuscript taking into account the suggested recommendations.
We address each comment and issue raised by the editor and reviewer and have highlighted the changes in the manuscript. We also attach a clean copy of the manuscript.

All authors have read and approved the final manuscript and declare no conflict of interest. These results have not been published anywhere nor are they under consideration at any other journal.

Thank you for considering the revised manuscript. We are looking forward to hearing from you.

With kind regards,

Dr Loai Albarqouni, Prof Tammy Hoffmann, Dr Katrina McLean, Dr Karen Price, and Prof Paul Glasziou

Editor Comments:

Dear authors,

This is a potentially interesting article, however there are several things that need to be clarified before it can be considered for a publication. There are some methodological points to be clarified/explained/taken into account that were raised by the reviewers and also it seems that your conclusions are not backed up by the results. If you are able to revise the paper according to reviewers' comments, I'll be happy to consider it for a publication.

Comment: Thanks.

Change: We revised the manuscripts per your and reviewers’ suggestions.

Reviewer reports:
Lorainne Tudor Car (Reviewer 1): Thank you for inviting me to peer-review this interesting paper.

This study aimed to analyse GP Facebook group posts for clinical questions and answers. This is an important topic as clinicians' clinical questions often go unanswered. Social media offers an accessible and convenient source of information from colleagues. The authors analysed a year's worth of Facebook posts in this group and found that GPs mostly asked foreground questions (>50%) related to skin condition (25%). The answers very rarely mentioned relevant research evidence.

Comment: Thanks.

Change: None
Major comments:

It would have been more reliable to have two authors independently perform the analysis of the posts. Alternatively, randomly checking a subset of the data would increase the reliability of the findings.

Comment: Thanks. We agree with you that it would be more reliable if two authors independently analysed all the posts. However, three authors analysed a random sample of the posts.

Change: We revised the methods to clarify this point. Relevant section in the methods page 4; lines 25-26 now reads “Three of the authors (LA, TH, and PG) independently analysed a random sample of 5% of posts and continued discussion until consensus was attained. LA coded the included questions and answers of the rest of included posts. Any uncertainties in the coding decisions were resolved by one of the co-authors with extensive experience in primary care (PG)”.

A quarter of questions relate to skin conditions. It would have been helpful to learn more about the type of skin conditions these questions related to. Also, it would have been useful to know how this data compares to published literature on primary care physicians' knowledge and information needs.

Comment: The most frequently answered skin questions were about skin lesions or neoplasm (n=11) followed by rash (n=9) and other skin condition such as dermatitis and acne.

Change: We illustrated this in the results section page 5; lines 20-21: “The five most frequently addressed topics were skin (n=47; 23%, 11 about skin neoplasm/lesion and 9 were pictures of a ‘rash’).” We also discussed this further in the discussion page 6; lines 21-25 “This is consistent with frequencies in previous studies of the most frequently asked clinical questions’ topics[14, 16], and most commonly managed conditions in general practice settings[11]. For instance, Bjørre et al analysed 1871 questions asked by 88 Canadian GPs and found that musculoskeletal, skin, and cardiac were among the five most frequently asked question topics[17].” and page 6 lines 14-19 “Our results regarding the question types are consistent with the results of a systematic review of 11 studies which examined 7012 clinical questions raised by clinicians (mostly GPs) at the point of care and found that the majority of clinical questions concerned treatment (34%) and diagnosis (24%) - with 30% of the question types accounting for 80% of the questions asked[5]. Similar, treatment and diagnosis were the most frequently observed types of clinical questions by Allan et al (observed 38 GPs during 420 consultations)[14] and Green et al (interviewed 64 residents after 401 consultations)[15].”

The presented limitations do not seem to be relevant to this study. My suggestion would be to mention generalizability - some clinicians may not be using Facebook at all (in your study it seems that out of 5k participants, only 500 contributed to this analysis).

Comment: Thanks – we added the suggested limitation.

Change: We added this limitation page 7; lines 14-17 “Further, we analysed questions posted in a single restricted Facebook group by GPs who thought to be active social media users (504 GPs out of 5800 GPDU members), therefore, our findings may not be generalised to GPs who do not actively use social
media or use other social media platform, or do not use social media at all.”

Furthermore, the lack of inclusion of evidence-based sources does not necessarily mean that the participants did not use evidence-based information but may instead mean that they did not feel it was important to include this information in their posts.

Comment: Thanks.

Change: We added this to the limitations page 7; lines 18-21 “We also did not verify the validity of provided answers or the evidence used to support these answers. Thus, answers that referred to sources of evidence might not be accurate or correct and answers that did not cite a source of evidence might be evidence-based answers or correct (i.e. the lack of referral to evidence sources did not necessarily mean that these answers are not evidence-based).”

The study design is only mentioned in the title - not sure whether this should be considered a cross sectional study given the duration of the study.

Comment: Thanks.

Change: We added the study design to the abstract and methods page 3 line 23 “In this cross-sectional study”.

Minor comments

While the study focused on clinical questions, it would have been useful to know whether other types of questions relating to patient safety, communication, administrative matters, etc. were also found.

Comment: Thanks for your comment. There were other non-clinical questions, such as services questions (i.e. ask for a specialist referral) or administrative questions (i.e. medicare number). However, they were out the scope of this analysis, and therefore, were not included or analysed.

Change: We clarified our focus on clinical questions in the methods page 4 lines 14-15 “the focus of this analysis is on clinical questions posts.”

It would also be interesting to learn what the remaining >800 posts focused on.

Comment: They were diverse posts including services questions (i.e. ask for a specialist referral) or administrative questions (i.e. medicare number). There were also posts discussing general issues relevant to the general practice and healthcare in Australia. However, detailed analysis of these posts is out of the scope of this analysis.

Change: We clarified our focus on clinical questions in the methods page 4 lines 14-15 “the focus of this analysis is on clinical questions posts.”
In your conclusion you mention that your study showed large engagement of GPs in social media - this does not seem to be backed up by the data.

Comment: Thanks. We meant that GPs have actively participated in asking and answering clinical questions which was manifested by the intensity of posts and comments provided.

Change: We revised the sentence per suggestion page 8; lines 4-6: “In this sample of Australian and New Zealand GPs, who were members of a GP social media group, high interest in asking and answering clinical questions on this forum was seen.”

In relation to future increase in the use of evidence-based resources, it may be helpful to mention that moderators/admins could share EBM sources, systematic reviews, guidelines etc. relevant to the posted question.

Comment: Thanks.

Change: We revised the discussion page 7; line 27: “Professional networks on social media might be used to promote practice change by active dissemination of patient-specific evidence-based information (such as by Facebook group administrators or evidence champions)”

Ulrik Bak Kirk, MA (Reviewer 2): The overall level of the paper is good, it is well written and some important considerations are highlighted. This paper has potential to be accepted, but some important points have to be clarified or fixed, before the publishing process can proceed and a positive action can be taken. To summarize the three main points:

#1 - "Social media networks" versus "single restricted Facebook group"

The authors investigate practicing family doctors' use of social media networks to overcome information overload and to address clinical questions generated from patient care. They analysed the clinical questions raised and answers provided in a closed Facebook group 'GPs Down Under' between 20 January and 10 February 2018. This means that the authors only include a single restricted Facebook group in the study, and for this reason, conclusions made about family doctors' usage of "social media networks" in plural should be made with caution. Especially, when new studies, such as "Social Networking App Use Among Primary Health Care Professionals: Web-Based Cross-Sectional Survey" (https://mhealth.jmir.org/2018/12/e11147/), suggest that WhatsApp is generally perceived as more useful for improving professional knowledge and clinical problem solving in a primary health care setting than Twitter and Facebook. This is merely a matter of contemporary social media trends, preferences, and time typical discussions of data confidentiality etc.

Comment: Thanks.

Change: We added this as a limitation page 7; lines 14-17 “Further, we analysed questions posted in a single restricted Facebook group by GPs who thought to be active social media users (504 GPs out of 5800 GPDU members), therefore, our findings may not be generalised to GPs who do not actively use social media or use other social media platform, or do not use social media at all.”
#2 - "Which media types used when posting and commenting?"
Family doctors posted approximately 10 questions per day when using a closed Facebook group to get feedback on clinical questions. The majority of questions asked were about treatment and diagnosis, and more than half of all included clinical questions were about a small number of clinical topics. This corresponds with the results of a systematic review done by Del Fiol G, Workman TE, Gorman P in 2014. But were any of the comments supported by photos, which could improve the quality of the feedback given by peers? The indexing of data included in the study does not inform about the different media types posted - text, photo, video etc. - which might also influence the quality of the interactions and their impact.

Comment: Thanks for your comments. Some included questions and comments were supplemented with photos. However, these photos were redacted, and the nature of these photos could not be identified and thus analysed, for confidentiality reasons
Change: None

#3 - "How to enhance the uptake of evidence into routine practice?"
The authors conclude that "disseminating research evidence to general practitioners using social media networks might be useful to enhance the uptake of evidence into routine practice" (page 2, lines 19-20), however only 6% of the answers in the study referred to published relevant evidence resource. This aligns with information seeking behaviour of clinicians in the sense that "evidence-based resources are rarely used by clinicians as a primary source of information to guide their decisions" (page 7, line 4). But if the information seeking behaviour of clinicians points towards not referring to evidence-based resources - as other information guide or drive their decisions - how could use of social media networks, such as Facebook groups, change this? How would using social media in itself enhance the uptake of evidence into routine practice, if it is not only a matter of accessibility of information, but rather about other facilitating components in a complex social intervention?

Comment: We suggested that social media networks can be used as a platform for evidence champions to disseminate evidence-based information and recommendations.
Change: We revised the discussion page 7; line 26: “Professional networks on social media might be used to promote practice change by active dissemination of question-specific evidence-based information (such as by Facebook group administrators or evidence champions)”