ARTICLE DETAILS

TITLE (PROVISIONAL)	
AUTHORS	

VERSION 1 - REVIEW

REVIEWER	Lesley Bainbridge University of British Columbia Canada
REVIEW RETURNED	02-Apr-2017

GENERAL COMMENTS	This scoping review has the potential to add to the field of interprofessional health education in primary health care. I have a few general comments and then some more minor editorial comments. General comments: 1. Overall the paper is well written and provides an interesting base from which to explore the effectiveness of on-line learning in interprofessional education and primary health care. Given the increasing prevalence of on-line learning, this is a timely scoping review. 2. The use of post graduate education is confusing. It seems that the review applies to post-licensure professionals working in primary health care but then post graduate is expanded to continuing professional development. Given that in many countries, several health professions are educated at the graduate level (masters or clinical doctorate), the terms graduate and post graduate can be misleading. It would be helpful to have the term "post graduate" clarified in the paper. 3. Primary health care appears to be the focus of the paper but there is significant use of the term "primary care" (and in one case family care – page 7) throughout the paper and I recommend that "primary health care" is used consistently to signal the use of interprofessional teams more clearly. 4. I liked the use of frameworks to present the findings: Arskey & O'Malley and Kirkpatrick worked well in this paper. Editorial comments: Title: The title does not specify post-graduate and yet this is a

	principal focus of the paper.
	Abstract: Objectives – the paper does not "aim to explore," it "explores."
	P3 Line 11: should read : e-learning in health professions' education
	P3 Line 14: meet should read "meets"
	P3 Line 19: is written in passive voice. There are several examples of passive voice throughout the paper and I recommend changing to active voice.
	P3 Line 22: recommend removing "even"
	P3 Line 37: the end of the sentence needs changing – I think there's something missing
	P 4 Line 4/5: recommend changing to "can undermine its quality"
	P4 Line 6: recommend removing "together"
	P4 Line 30: recommend "the goal of a scoping review is "to…
	P4 Line 34: recommend 'This review specifically examines…
	P7 Lines 5-7: the sentence appears to be incomplete
	P 9 Lines 20-21: recommend "enabling insight…
	P10 Lines 12-20: It is unclear how the review of the abstracts differed from the review of the full text – if the abstract review was to confirm that the paper met the inclusion criteria, was the full text review a second check on the inclusion criteria?
	P10 Lines 48-55: recommend just listing the number of papers found associated with each profession. E.g. The professions represented included medicine (14 studies), nursing (13 studies), pharmacy (3 studies) and so on…
	P11 Lines3-4: the first sentence is awkward. Recommend something like: Appendix 1 provides an overview of the key content of the papers reviewed including aim of the…….etc
	P11 Line 33: recommend something like "There was also some use of mixed and qualitative methods (case study designs) using interviews and focus groups."
	P13 Line 20: recommend "…the authors stated…"
	P13 Lines 39-48: This section refers to 3 issues in the heading but they are referred to as one issue in the text

P14 Line 9: recommend starting the sentence with "Four" rather than the numerical version of the number

P14: In the section on technical challenges, I was surprised not to see anything about the difficulties some people have in learning how to navigate the on-line platforms. This was mentioned in the introduction but doesn't come up again yet it is a real challenge for many people.

P14: I wasn't sure if Kirkpatrick needed to be referenced again in Table 3.

P14; In the discussion, there was nothing about learning styles and whether certain learning styles are better suited to e-learning. Perhaps this didn't appear in the papers?

P15 Line 32: consequent should be *consequence*

P 15 Line 37: offer should be *offers*

P 15 Line 54: recommend "..instance to avoid disruption of the quality…"

P16 Line 11: should read *identified a number*

P16 Line 47: should read *associated with*

P16 Line 48: should read *does generate*

P16 Line 49: recommend deleting "nature"

P16 Line 51: recommend *identify* instead of draw

P17 Line 3: should read "by an e-facilitator"

P17 Line 15: The sentence doesn't make sense as written

REVIEWER	Diane Bridges PhD Chicago Medical School at Rosalind Franklin University of Medicine and Science
REVIEW RETURNED	28-Apr-2017

GENERAL COMMENTS	Please see below comments. Even though no was checked in several areas, these can be addressed by the authors and the paper would be acceptable for publication. • Page 3 Line 10 The advantages of e-learning **in the** for health professions education…delete words. Define e-learning. • Page 3 Line 37 can move to line 47 (tech. issues) to align better with the discussion of issues. • Page 4 Line 17 Define primary care teams. • Page 5 line 42 "What methods of interprofessional e-learning **if**?? identified work.

- Page 5 Lines 47-54 you list two research questions above but now list two elements of the research question. I believe it would have made more sense to list the research questions and then say "specifically" and list your element if necessary. Your second element you are looking at outcomes but your question 2 addresses methods of teaching so do you really have 3 questions (or 4)? Line 53 *Organizations* is spelled organisations. ? language is ok?
- Page 6 Comment: Line 14 terms like "online" education and "distance" education may have obtained more results especially since on page 7 you use the term "online" interchangeably with e-learning.
- Page 6 Line 49 CINAHL should be capitalized. PubMed also needs to be fixed line 52.
- Page 7 Line 49- you mention you had very little literature regarding postgraduate education but that was not one of your listed original search terms?
- Pages 10-11 I would have liked more detailed discussion on the approaches and methods. I do not have a clear picture of the mixed methods used, etc. even when looking at the attachment.
- Page 11 Line 44 key educational issues....are these themes versus issues? Line 57 again European spelling of realiz(s)ing?OK??Editor decision
- Page 14 Did not re-mention in your discussion the original study questions or address each along with your two elements. *" What is the nature of evidence on online postgraduate education for primary health care interprofessional teams? What methods of interprofessional e-learning if identified work – i.e. improve learning outcomes? Online or e-learning can be described as both a pedagogical and technological approach (3). As a result, this report presents the research questions above in a way which focused on two elements. First, the characteristics of the interprofessional e-learning approaches/methods evaluated in included studies. Second, the range of reported consequences (outcomes) for primary care learners, their organisations and the care delivered to patients/clients."* But you mention that this is a scoping review and the criteria of that. If this is a scoping review and as such they do not "seek to answer specific questions" why did you list two specific research questions to address? I don't think you should list as research questions but rather scoping review outcomes. Page 4 Line 30 you state the goal of a scoping review by listing the extent, range, nature of activity, value, finding and gaps. Your conclusion could have been presented in this manner.
Or page 5 line 30 you state: "Responding to the intention to formulate and establish an interprofessional e-learning model, the research questions should enable: *the mapping of existing work which addresses interprofessional e-learning in primary care teams; an understanding of the influence of such work and the depth and breadth of 'the field'; and the identification of significant knowledge gaps*

	and areas for improvement. Yet you did not list your conclusions in this manner?
	It appears the goal of this review was written in several different ways. A recommendation is to pick one approach and discuss it in that manner in the conclusion section. . In the end, I think your review identified:
	- E learning approaches (although I wanted to see more details on these.)
	- Methodology of e-learning-(although I wanted more details)
	- Positive and negative uses of e-learning.
	- Outcomes
	I question the use of the term interprofessional teams. Many of the studies were self directed learning courses and while open to several professions...the evaluation of an IP team is different from allowing several independent professionals to take a course without interacting with each other or in any type of IP team approach... So while the evidence may support the e-learning approach to education; how are you able to say e-learning impacted IP teamwork if individuals rather than teams took the courses asynchronously?
	I think the overall content of this article is there. I think improvements and clarifications need to be addressed as mentioned above before publication.

VERSION 1 – AUTHOR RESPONSE

This scoping review has the potential to add to the field of interprofessional health education in primary health care. I have a few general comments and then some more minor editorial comments.

General comments:
1. Overall the paper is well written and provides an interesting base from which to explore the effectiveness of on-line learning in interprofessional education and primary health care. Given the increasing prevalence of on-line learning, this is a timely scoping review. Thank you
2. The use of post graduate education is confusing. It seems that the review applies to post-licensure professionals working in primary health care but then post graduate is expanded to continuing professional development. Given that in many countries, several health professions are educated at the graduate level (masters or clinical doctorate), the terms graduate and post graduate can be misleading. It would be helpful to have the term "post graduate" clarified in the paper. We have added an endnote to clarify the term post graduate in a primary health care context
3. Primary health care appears to be the focus of the paper but there is significant use of the term "primary care" (and in one case family care – page 7) throughout the paper and I recommend that "primary health care" is used consistently to signal the use of interprofessional teams more clearly. Done – we have changed to primary health care
4. I liked the use of frameworks to present the findings: Arskey & O'Malley and Kirkpatrick worked well in this paper. Thank you

Editorial comments:

Title: The title does not specify post-graduate and yet this is a principal focus of the paper. As

presented in the footnote, primary care education is completed at the postgraduate stage so is implicit in the title, so no need to make it explicit.

Abstract: Objectives – the paper does not "aim to explore," it "explores." Done

P3 Line 11: should read : e-learning in health professions' education Done
P3 Line 14: meet should read "meets" Done
P3 Line 19: is written in passive voice. There are several examples of passive voice throughout the paper and I recommend changing to active voice. Thank you. Having re-read the paper we are happy with its presentation in this regard.
P3 Line 22: recommend removing "even" Done
P3 Line 37: the end of the sentence needs changing – I think there's something missing Done
P 4 Line 4/5: recommend changing to "can undermine its quality" Done
P4 Line 6: recommend removing "together" Done
P4 Line 30: recommend "the goal of a scoping review is "to… Done
P4 Line 34: recommend 'This review specifically examines… Done
P7 Lines 5-7: the sentence appears to be incomplete Done
P 9 Lines 20-21: recommend "enabling insight… Done
P10 Lines 12-20: It is unclear how the review of the abstracts differed from the review of the full text – if the abstract review was to confirm that the paper met the inclusion criteria, was the full text review a second check on the inclusion criteria? Yes - we have amended the text a little to make this clearer
P10 Lines 48-55: recommend just listing the number of papers found associated with each profession. E.g. The professions represented included medicine (14 studies), nursing (13 studies), pharmacy (3 studies) and so on… Done
P11 Lines3-4: the first sentence is awkward. Recommend something like: Appendix 1 provides an overview of the key content of the papers reviewed including aim of the…….etc Done
P11 Line 33: recommend something like "There was also some use of mixed and qualitative methods (case study designs) using interviews and focus groups." Done
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P14 Line 9: recommend starting the sentence with "Four" rather than the numerical version of the number Done
P14: In the section on technical challenges, I was surprised not to see anything about the difficulties some people have in learning how to navigate the on-line platforms. This was mentioned in the introduction but doesn't come up again yet it is a real challenge for many people. Due to word limits we referred to these challenges in a generic fashion and so did not provide specific details. Having relooked at the text we do not feel the need for further specifics here.
P14: I wasn't sure if Kirkpatrick needed to be referenced again in Table 3. Done
P14; In the discussion, there was nothing about learning styles and whether certain learning styles are better suited to e-learning. Perhaps this didn't appear in the papers? No, this element was not mentioned in the included papers so we have not included it in this section of the paper
P15 Line 32: consequent should be consequence Done
P 15 Line 37: offer should be offers Done
P 15 Line 54: recommend "..instance to avoid disruption of the quality…"Done
P16 Line 11: should read identified a number Done
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P17 Line 3: should read "by an e-facilitator" Done
P17 Line 15: The sentence doesn't make sense as written Done

In addition, a full list of the 23 studies included in the review has been added. It now forms Appendix 1

BMJ Review 4-24-17

Page 3 Line 10 The advantages of e-learning in the for health professions education…delete words. Define e-learning. Done. Added definition as end note
Page 3 Line 37 can move to line 47 (tech. issues) to align better with the discussion of issues. Done
Page 4 Line 17 Define primary care teams. Added definition as end note
Page 5 line 42 "What methods of interprofessional e-learning if?? identified work. Amended to become clearer – this also addressed bulletin point below
Page 5 Lines 47-54 you list two research questions above but now list two elements of the research question. I believe it would have made more sense to list the research questions and then say "specifically" and list your element if necessary. Your second element you are looking at outcomes but your question 2 addresses methods of teaching so do you really have 3 questions (or 4)? Line 53 Organizations is spelled organisations. ? language is ok? We have revised this section to provide clearer research questions. We have used UK spellings – happy to amended if needed
Page 6 Comment: Line 14 terms like "online" education and "distance" education may have obtained more results especially since on page 7 you use the term "online" interchangeably with e-learning. Thank you for this comment. Our end notes have now provided clearer information about these terms
Page 6 Line 49 CINAHL should be capitalized. PubMed also needs to be fixed line 52. Done
Page 7 Line 49- you mention you had very little literature regarding postgraduate education but that was not one of your listed original search terms? Thank you for the comment. Having 'tested' various terms before we started the searches, we actually found that adding the term 'postgraduate education' narrowed the search results.
Pages 10-11 I would have liked more detailed discussion on the approaches and methods. I do not have a clear picture of the mixed methods used, etc. even when looking at the attachment. Having re-read the paper we feel this section is sufficiently clear given the extensive table presented in the appendices. We did add a definition of mixed methods.
Page 11 Line 44 key educational issues….are these themes versus issues? Line 57 again European spelling of realiz(s)ing?OK??Editor decision Like other papers, we have used themes and issues interchangeably. As noted above, we have used UK spellings but are happy to change to US if needed.
Page 14 Did not re-mention in your discussion the original study questions or address each along with your two elements. " What is the nature of evidence on online postgraduate education for primary health care interprofessional teams? What methods of interprofessional e-learning if identified work – i.e. improve learning outcomes? Online or e-learning can be described as both a pedagogical and technological approach (3). As a result, this report presents the research questions above in a way which focused on two elements. First, the characteristics of the interprofessional e-learning approaches/methods evaluated in included studies. Second, the range of reported consequences (outcomes) for primary care learners, their organisations and the care delivered to patients/clients." We have now changed our research questions to address this issue, and made a minor edit to better link the discussion with our research questions. We have also edited the abstract to reflect the changes to the research questions
But you mention that this is a scoping review and the criteria of that. If this is a scoping review and as such they do not "seek to answer specific questions" why did you list two specific research questions to address? I don't think you should list as research questions but rather scoping review outcomes.
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work which addresses interprofessional e-learning in primary care teams; an understanding of the influence of such work and the depth and breadth of 'the field'; and the identification of significant knowledge gaps and areas for improvement. Yet you did not list your conclusions in this manner?

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- E learning approaches (although I wanted to see more details on these.)
- Methodology of e-learning-(although I wanted more details)
- Positive and negative uses of e-learning.
- Outcomes

The statement on page 5, line 30 provides a broad account of what a scoping review could explore, which helps transition to the actual research questions. We have revised this section of the paper for improved clarity. Our research questions are addressed in both the discussion and conclusion.

I question the use of the term interprofessional teams. Many of the studies were self directed learning courses and while open to several professions…the evaluation of an IP team is different from allowing several independent professionals to take a course without interacting with each other or in any type of IP team approach… So while the evidence may support the e-learning approach to education; how are you able to say e-learning impacted IP teamwork if individuals rather than teams took the courses asynchronously? This is a good point. However, the reviewer is making the assumption that all teams learn together in a synchronous fashion, which overlooks the fact that many study in an asynchronous (more fragmented) manner. We used the terms (e.g. 'team members') that authors in the included papers employed when referring to study participants, though authors did not always make it explicitly clear what the level of interaction was. We happy to add this in as a limitation if the editors are keen for us to do so.

I think the overall content of this article is there. I think improvements and clarifications need to be addressed as mentioned above before publication. Thank you

VERSION 2 – REVIEW

REVIEWER	Diane Bridges PhD Chicago Medical School at Rosalind Franklin University North Chicago, IL USA
REVIEW RETURNED	30-May-2017

GENERAL COMMENTS	I believe the authors have addressed prior concerns.