PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	What are the patient factors that impact on the decision to progress to total knee replacement? A qualitative study involving patients with knee osteoarthritis.
AUTHORS	O'Brien, Penny; Bunzli, Samantha; Ayton, Darshini; Dowsey, Michelle; Gunn, Jane; Manski-Nankervis, Jo-Anne

VERSION 1 – REVIEW

REVIEWER	Alba Realpe Senior Research Associate in Qualitative Methods Population Health Sciences University of Bristol Bristol, UK
REVIEW RETURNED	30-May-2019

GENERAL COMMENTS	The article describes a qualitative study of patient experiences of being referred for TKR in the context of the Australian health service. The article discussed an interesting aspect of the TKR referral pathway, patients reported lack of offers and information about non-surgical treatments for knee OA. The article is clearly written, concise and informative. In relation to the methods used in this study, I have the following comments: 1. The authors used the candidacy framework as guidance to data collection and analysis. They stated in the discussion that it was a strength of the paper. I think the reasons for these need to be more explicit. Would this framework be more advantageous than inductive coding, for example? Would they recommend its use? 2. The authors stated they used deductive and inductive coding. However, the results section reflected mainly their deductive approach. I would use inductive coding to present unexpected or negative (contradictory) results but they may be not necessary in this case. What did you find through the inductive coding? Perhaps the relation between inductive and deductive coding could be better explained. In relation to the references, I would like to highlight a systematic literature review of qualitative research by a colleague of mine. Barlow et al (2015) presented factors involved in patient decision making in total knee arthroplasty from seven studies, which are similar results to those reported in this study. The present study presented novel results in relation to access to care by showing the ease and linear trajectory of surgical referral that patients experience. I would recommend making more emphasis on these messages. In relation to the discussion and conclusion, I am unsure if the authors' message is that the results indicate that GPs are not

	providing information about non-surgical treatments for knee OA. The evidence for this is fragile when considering the sample. The study was conducted with patients who already decided to have TKR, and about half have had a TKR. Their recall during interviews could be susceptible to confirmation bias, this is a well-known effect of asking people about their decision to go for surgery. I also wonder if coding for those patients who have had TKR from those who have not yet differed in a significant way in relation to non-surgical treatment considerations. There is an important message about access of care for people with knee OA that is worth of further research and dissemination.

REVIEWER	Laurie Goldsmith Simon Fraser University, Canada
REVIEW RETURNED	26-Jun-2019

GENERAL COMMENTS	BMJ Open Review Paper titled “Candidacy and the pathway to total knee replacement: a qualitative study” This paper has promise but significant refinement is needed. The background section could be tighter and more directly related to the decision to progress to TKR. And more detail could be provided on the reasoning for using the Candidacy framework to investigate the patient experience of the decision to progress to TKR. (Related--why is using the Candidacy framework a strength of the study worth mentioning in the Strengths and Limitations section at the end of the paper?) The overall setup of the paper also must deal with the disconnect between the initial setup of GP decisions and using a overall framework that focuses on the patient perspective. The authors claim to be using framework analysis yet the paper does not appear to be using framework analysis. They are not creating a framework from the study data as they start with an already fairly detailed a priori framework. And they show no evidence of Ritchie & Spencer’s 1994 steps 4 (charting, or the organizing of all the data using the framework to allow for within-case and between-case analysis) and 5 (mapping and interpretation, or the finding of patterns in the data). (If the authors would like to say they are doing a partial framework analysis, evidence of steps 4 and 5 could be shown in the description of the analysis steps or in the results. Table 2 does not have quotes from 9 of the interviews, for instance.) It appears that the authors are actually using thematic analysis where they start with themes from an a priori framework (namely, the Candidacy framework). Two papers that have done this successfully that the authors could use as a reference for an approach to reworking their paper are: Koehn, S. (2009). Negotiating candidacy: Ethnic minority seniors’ access to care. Ageing & Society, 29(4), 585–608. https://doi.org/10.1017/S0144686X08007952 Koehn, S., Badger, M., Cohen, C., McCleary, L., & Drummond, N. (2016). Negotiating access to a diagnosis of dementia: Implications for policies in health and social care. Dementia, 15(6), 1436–1456. https://doi.org/10.1177/1471301214563551

	The title of the paper could also better reflect the analytic approach. More details could be provided about the setup of the Australian health care system and its effects on the patient experience of progressing to TKR. It would be helpful to make it clearer to the reader where substitution effects are likely to occur within this phenomenon. It would also be helpful to specify whether referrals to the orthopedic surgeon are under the sole control of the GP or whether the patient can self-refer to an orthopedic surgeon. And consider putting the study setting in a separate section in the methods. Much of what is provided early in the discussion section would be more appropriate to have in this study setting section in methods. With respect to expectations around saturation, it is not clear what the authors mean by "the homogeneity of the population group." In the same paragraph, it is also not clear what the authors mean by "drop-out in the follow up study"—what follow up study and why is it relevant for this paper? With respect to the semi-structured interview guide, if the Candidacy framework was guiding the study, why would the authors be interested in "explor[ing] emerging themes beyond that of the Candidacy framework"? And what conditions prompted refinement of the interview guide? The interviews lasted from 12 to 53 minutes with an average of 30 minutes. Given the detail in the Candidacy framework, I am surprised that the majority of interviews were so short. More description could have been provided about the study sample to provide more context to the data with respect to the Candidacy framework (e.g., aspects of vulnerability). And Table 1 appears unnecessary as most of the details are already provided in the text and the remaining details could be quickly summarized. Too much detail is provided about people who were not recruited. The number of study participants is stated as 27 in one paragraph and 28 in the next paragraph. The presentation of the results associated with the Candidacy framework is unusual. Why are quotes presented beside each component of the Candidacy framework? How were these quotes selected? What work are these quotes doing in the results? And why have the authors identified themes for each domain in the Candidacy framework? Is this an expansion of the Candidacy framework? And why are there bracketed Qs after multiple sentences throughout the results section? With respect to the quotes in the tables, why are they preceded by "Q1," "Q2", etc.? Are these the interview questions? And the authors should consider removing the identifying details of interview number, sex, and age alongside each quote as too many identifying details are provided which makes it possible to track participants and possibly identify participants. The discussion section could have been tighter and more specifically related to the Candidacy framework. The authors have also missed an opportunity to comment on the usefulness of the candidacy framework. Such commentary, including suggestions for

	improving the candidacy framework, should be added to the discussion section. Mentioning another study in the strengths and limitations section was confusing and unnecessary. It is also unclear what the authors mean in this section by having undergone a previous TKR may have affected "[participants] ability to recall previous experiences…."

VERSION 1 – AUTHOR RESPONSE

Reviewer: 1
Reviewer Name: Alba Realpe
Institution and Country: Senior Research Associate in Qualitative Methods Population Health Sciences University of Bristol Bristol, UK Please state any competing interests or state 'None declared': None declared.
Please leave your comments for the authors below:
The article describes a qualitative study of patient experiences of being referred for TKR in the context of the Australian health service. The article discussed an interesting aspect of the TKR referral pathway, patients reported lack of offers and information about non-surgical treatments for knee OA. The article is clearly written, concise and informative.

	In relation to the methods used in this study, I have the following comments:
1.	The authors used the candidacy framework as guidance to data collection and analysis. They stated in the discussion that it was a strength of the paper. I think the reasons for these need to be more explicit. Would this framework be more advantageous than inductive coding, for example? Would they recommend its use?

We thank the reviewer for prompting us to clarify this important point. We have added additional information about the Candidacy framework being able to make sense of patients' health care access journey including their decision making. Please see page 6, line 102-105:

"Rather than focusing on utilisation as a proxy for health care access, Candidacy emphasises the complex and contingent nature of health care access and has been applied to understand different stages of a patients' healthcare journey by incorporating psychosocial factors which may influence decision making."

We have also added detail in the discussion about the strengths that using the Candidacy framework provided. The Candidacy framework was first developed to describe healthcare access and behaviours in vulnerable populations. This study looked at a sample of people with end-stage osteoarthritis awaiting total knee replacement. This study extends the literature, highlighting that this is a useful framework to understand access across primary and secondary care for people with chronic conditions, therefore illustrating that the Candidacy framework is adaptable to different population groups. We have added detail in the discussion to highlight this. Please see page 18, line 361-365.

"The study also utilised the Candidacy framework to provide a conceptual lens to understand health care access from the beginning of the study. We have demonstrated that the Candidacy framework is a useful framework for describing health care access for complex chronic health conditions and that the framework can be adapted for use in samples beyond that of vulnerable groups for which it was originally designed."

We have also added detail in the strengths and limitations summary at the beginning of the paper on page 4, line 49-52:

"The Candidacy framework was utilised to provide a conceptual lens to understand health care access for people with knee OA, a complex and chronic health condition. We have demonstrated that the

Candidacy framework is a useful framework for describing health care access beyond that of vulnerable groups for which it was originally designed."

2.	The authors stated they used deductive and inductive coding. However, the results section reflected mainly their deductive approach. I would use inductive coding to present unexpected or negative (contradictory) results but they may be not necessary in this case. What did you find through the inductive coding? Perhaps the relation between inductive and deductive coding could be better explained.

Please refer to response to comment 3, reviewer 2.

3.	In relation to the references, I would like to highlight a systematic literature review of qualitative research by a colleague of mine. Barlow et al (2015) presented factors involved in patient decision making in total knee arthroplasty from seven studies, which are similar results to those reported in this study. The present study presented novel results in relation to access to care by showing the ease and linear trajectory of surgical referral that patients experience. I would recommend making more emphasis on these messages.

We thank the reviewer for their comment and have considered the findings from Barlow et al 2015 in the background, page 5-6, line 87-95:

"Understanding how patients receive health information is critical to understanding patients' engagement in non-surgical interventions and decision to progress to TKR. Understanding decision making for, and access to TKR has the potential to improve information provided to patients in general practice and pre-operatively and in turn may help to address the high rates of patient dissatisfaction post-TKR (approximately 17%) (7). Evidence suggests that 12-20% of patient who undergo TKR also do not show clinically relevant improvements (8). As the demand for TKR increases with corresponding financial pressure, there is an imperative to develop resources and decision-making tools to assist GPs and patients in their decision to access surgery (7)."

As well as the strengths and limitations section page 17-18 line 357-361:

"While this study is in an Australian context, similar findings in relation to patient decision making for TKR have been seen in other healthcare contexts (7). Overlapping themes such as coping, pain and function, psychological implications, previous experience of surgery and the important role of social networks suggest that the results of our study are consistent with international literature (7)."

4.	In relation to the discussion and conclusion, I am unsure if the authors' message is that the results indicate that GPs are not providing information about non-surgical treatments for knee OA. The evidence for this is fragile when considering the sample. The study was conducted with patients who already decided to have TKR, and about half have had a TKR. Their recall during interviews could be susceptible to confirmation bias, this is a well-known effect of asking people about their decision to go for surgery. I also wonder if coding for those patients who have had TKR from those who have not yet differed in a significant way in relation to non-surgical treatment considerations.

We agree with the reviewers above comments. We are unable to comment on the quality of the information health providers are currently providing patients based on the design of this study. However, based on the findings, it seems that more can be done to provide patients with information that they can understand about osteoarthritis, their prognosis and the importance of engaging non-surgical strategies. We have toned down the language in these sections to reflect the reviewer's comments for example in the Abstract on page 3 line 43-46:

"Patients with knee OA require improved support to navigate allied health services. GPs are well placed to provide information on the prognosis of OA, pain management and the benefits of exercise and could play an important role in facilitating uptake of non-surgical interventions."

And page 18-19, line 380-384:

“GPs are the gatekeepers to care and are well placed to provide information about the benefits of non-surgical interventions for knee OA. There is an opportunity for the development of resources and decision-making tools to assist GPs in providing this information. This would support shared decision-making for the trial of non-surgical intervention prior to surgery, which is likely to improve patient outcomes even when surgery is required.”

The authors also agree that we must address the issue of confirmation bias. We have highlighted this in the Discussion/limitations section on page 18, line 366-376:

“Limitations of this study include only recruiting patients attending a metropolitan public hospital who had been consented to proceed to TKR. Therefore, the study findings may not be reflective of the experience of people with OA in the community, who have not yet considered surgical intervention or with lower levels of health literacy. Half of the participants in this study were also undergoing their second TKR. As expected, familiarity with the referral process and 'knowing what to expect' meant these participants perceived access to TKR as 'easy'. However, similar themes related to all seven domains were identified between people undergoing their first and second TKR suggesting that, while the experience of a previous TKR may have facilitated access, the social influences underlying access remained consistent.”

Reviewer: 2
Reviewer Name: Laurie Goldsmith
Institution and Country: Simon Fraser University, Canada Please state any competing interests or state ‘None declared’: None declared.
This paper has promise but significant refinement is needed.

1. The background section could be tighter and more directly related to the decision to progress to TKR. And more detail could be provided on the reasoning for using the Candidacy framework to investigate the patient experience of the decision to progress to TKR. (Related--why is using the Candidacy framework a strength of the study worth mentioning in the Strengths and Limitations section at the end of the paper?)

The authors have refined the background section and included a paragraph which addresses the importance of understanding decision to progress to TKR. Please see updated background section and additional paragraph on page 5, line 87-95:

“Understanding how patients receive health information is critical to understanding patients’ engagement in non-surgical interventions and decision to progress to TKR. Understanding decision making for, and access to TKR has the potential to improve information provided to patients in general practice and pre-operatively and in turn may help to address the high rates of patient dissatisfaction post-TKR (approximately 17%) (7). Evidence suggests that 12-20% of patient who undergo TKR also do not show clinically relevant improvements (8). As the demand for TKR increases with corresponding financial pressure, there is an imperative to develop resources and decision-making tools to assist GPs and patients in their decision to access surgery (7).”

The Candidacy framework is a useful framework to be able to make sense of patients’ health care access journey including their decision making, and as such we believe that is a strength of this study. We have added additional detail to the Strengths and limitations section to reflect this; please see response 1 to reviewer 1 above.

2. The overall setup of the paper also must deal with the disconnect between the initial setup of GP decisions and using an overall framework that focuses on the patient perspective.

The specific aim of our study was to explore the perception and experience of patients with knee osteoarthritis. We acknowledge that the perspective of GPs involved in their care are important and

that there might be differences in the perceptions of care provided. Please see the updated Strengths and Limitations summary on page 4, line 61:

“The perceptions and experience of health professionals were not explored in this study”

And in the body of the paper on page 18, line 374-376:

“Future prospective qualitative studies following along the journey of their knee OA would be valuable, as would interviewing health professionals to understand their perspectives on factors influencing the patient journey.”

3. The authors claim to be using framework analysis yet the paper does not appear to be using framework analysis. They are not creating a framework from the study data as they start with an already fairly detailed a priori framework. And they show no evidence of Ritchie & Spencer’s 1994 steps 4 (charting, or the organizing of all the data using the framework to allow for within-case and between-case analysis) and 5 (mapping and interpretation, or the finding of patterns in the data). (If the authors would like to say they are doing a partial framework analysis, evidence of steps 4 and 5 could be shown in the description of the analysis steps or in the results. Table 2 does not have quotes from 9 of the interviews, for instance.) It appears that the authors are actually using thematic analysis where they start with themes from an a priori framework (namely, the Candidacy framework). Two papers that have done this successfully that the authors could use as a reference for an approach to reworking their paper are: 1. Koehn, S. (2009). Negotiating candidacy: Ethnic minority seniors’ access to care. Ageing & Society, 29(4), 585–608. https://doi.org/10.1017/S0144686X08007952 2. Koehn, S., Badger, M., Cohen, C., McCleary, L., & Drummond, N. (2016). Negotiating access to diagnosis of dementia: Implications for policies in health and social care. Dementia, 15(6), 1436–1456. https://doi.org/10.1177/1471301214563551

We thank the reviewer for this insightful comment and additional useful references provided. We have used this as an opportunity to simplify the language and strip out detail in the methodology. We have removed reference to framework analysis and provided a simplified description of our analysis process. The authors agree that we have used thematic analysis with an a priori framework. We coded transcripts and mapped the themes that emerged back to the domains of the Candidacy framework. We believe these changes improve the readability of the paper. Please refer to changes on page 8, line 155-159.

“Data analysis was conducted concurrently with data collection to allow for emerging themes in the data to be pursued in future interviews. Transcripts were reviewed and coded by two researchers independently (PO and SB). Using thematic analysis (6), the researchers identified codes in the data and mapped these codes to the seven Candidacy domains. For each domain, mapped codes were grouped into themes.”

And under the Design heading in the Abstract on page 2, line 30-32:

“Data were analysed using a thematic analysis approach in which codes identified in the data were mapped to the seven Candidacy domains and themes corresponding to each domain were described.”

4. The title of the paper could also better reflect the analytic approach.

The authors thank the reviewer for prompting us to adjust our title. We have updated our title to better reflect our research question. Please refer to updated title in the manuscript and below:

“What are the patient factors that impact on the decision to progress to TKR? A qualitative study involving patients with knee OA”

5. More details could be provided about the setup of the Australian health care system and its effects on the patient experience of progressing to TKR. It would be helpful to make it clearer to the reader where substitution effects are likely to occur within this phenomenon. It would also be helpful to specify whether referrals to the orthopedic surgeon are under the sole control of the GP or whether the patient can self-refer to an orthopedic surgeon. And consider putting the study setting in a separate section in the methods. Much of what is provided early in the discussion section would be more appropriate to have in this study setting section in methods.

Thank you for prompting us to provide additional detail about the setup of the Australian health care system. We have now provided explanation of the Australian health care system under a separate 'Setting' heading. We have made the absence of out of pocket costs in the public hospital system more explicit to make it clearer to the reader where substitution effects may occur. We have also clarified that it is not possible to self-refer to an orthopaedic surgeon in publicly funded hospitals. Please refer to changes in the Setting section on page 6-7, line 112-123:

"This study took place at an orthopaedic pre-admission clinic at a publicly funded metropolitan tertiary hospital in Melbourne, Victoria. The clinic performs a high volume of TKRs and receives referrals from both metropolitan Melbourne and regional areas in Victoria. Australia's health care is delivered in a mixed system with private providers and universal health care (Medicare). Residents are entitled to a Medicare rebate for medical treatment through primary care (although practices may choose to charge fees in excess of this) and publicly funded hospitals. Patients who choose to access the public system for TKR will not incur any out-of-pocket medical costs, however, patients require a referral to see a specialist for elective surgery and are unable to self-refer to an orthopaedic surgeon. Rebates for access to community based allied health services are limited to five visits per year (for all providers combined) and only available to those that have a GP management plan in place."

6. With respect to expectations around saturation, it is not clear what the authors mean by "the homogeneity of the population group." In the same paragraph, it is also not clear what the authors mean by "drop-out in the follow up study"—what follow up study and why is it relevant for this paper?

The authors have simplified the patients and methods section to clarify the above queries. Please see amendments on page 8, line 140-142:

"The researchers anticipated that data saturation would occur by 20-25 interviews based on previous research (13-15). Therefore, a sample size of 30 was the recruitment target to allow for further testing of themes beyond saturation."

7. With respect to the semi-structured interview guide, if the Candidacy framework was guiding the study, why would the authors be interested in "explor[ing] emerging themes beyond that of the Candidacy framework"? And what conditions prompted refinement of the interview guide?

Thank you for the opportunity to clarify. We have changed this to more clearly reflect what we did on page 8, line 146-149:

"Interviews were semi-structured and based on the domains of the Candidacy framework (Appendix 1). While the interview schedule was structured on Candidacy, interviews were semi-structured to allow for any new directions raised by the participants related to the factors impacting on decisions to progress to TKR to be explored."

8. The interviews lasted from 12 to 53 minutes with an average of 30 minutes. Given the detail in the Candidacy framework, I am surprised that the majority of interviews were so short.

One interview that we performed was short (12 minutes). Overall, these were rich interviews and we would like to clarify that interviews were on average 30min. We have taken out the range relating to the length of the interviews as we believe it to be misleading in terms of the richness of our data. See page 9, line 176-178:

"Interviews lasted for 30 minutes on average. No differences in length or content were observed between face-to-face and telephone interviews."

9. More description could have been provided about the study sample to provide more context to the data with respect to the Candidacy framework (e.g., aspects of vulnerability). And Table 1 appears unnecessary as most of the details are already provided in the text and the remaining details could be quickly summarized. Too much detail is provided about people who were not recruited. The number of study participants is stated as 27 in one paragraph and 28 in the next paragraph.

Thank you for the opportunity to clarify. We had added detail around our reasoning for using the Candidacy framework in the Design and Framework section on page 6 line 102-105:

"Rather than focusing on utilisation as a proxy for health care access, Candidacy emphasises the complex and contingent nature of health care access and has been applied to understand different stages of a patients' healthcare journey by incorporating psychosocial factors which may influence decision making"

Our participants were not recruited from a minority or vulnerable group specifically. However, we believe that experiencing a chronic health condition such as end stage osteoarthritis is complex, and the ability to access the healthcare system and make decisions is dependent on multiple factors including health literacy, experience with health services, social and financial factors and multimorbidity. Candidacy Framework has been used in other studies that do not specifically target minority and vulnerable groups. An example of this is Tookey's paper exploring help seeking of people with cancer alarm symptoms in primary care, which used Candidacy Framework as it addresses interactions between people and health professionals which are often not sufficiently addressed in other frameworks (BMC Health Services Research (2018) 18:937). We were interested to see how the Candidacy framework would perform when used to explore the experience of people with chronic disease attending primary care.

The authors have removed the detail provided about people who were not recruited and addressed the mistake identified in the number of participants recruited. Please see page 9 line 173-175:

"Four patients declined participation at the time of recruitment and a further four participants declined when called for interview. Half the participants were undergoing their second TKR and one participant had been consented for bilateral simultaneous TKRs. Twenty-seven..."

10. The presentation of the results associated with the Candidacy framework is unusual. Why are quotes presented beside each component of the Candidacy framework? How were these quotes selected? What work are these quotes doing in the results? And why have the authors identified themes for each domain in the Candidacy framework? Is this an expansion of the Candidacy framework? And why are there bracketed Qs after multiple sentences throughout the results section? With respect to the quotes in the tables, why are they preceded by "Q1," "Q2", etc.? Are these the interview questions? And the authors should consider removing the identifying details of interview number, sex, and age alongside each quote as too many identifying details are provided which makes it possible to track participants and possibly identify participants.

We thank the reviewer for prompting us to clarify the presentation of the results section. We have provided an alternate version of the results table. This table also provides the themes associated with each of the Candidacy domains, with quotes that support the identified them. Column 1 provides the Candidacy domain with simplified description in the context of knee osteoarthritis. Column 2 proves the themes identified for each Candidacy domain. Column 3 provides supporting quotes for each theme identifies. We have amended our original codes "Q1" to refer directly to the quote number i.e "Quote 1" which are referenced in the results section.

In addition to the updated table, we have proved additional detail about the presentation of the results and use of themes. Please see page 9-10, line 179-183 for updated results.

"The results are presented for each domain of the Candidacy framework, starting with a description of the domain and followed by the themes identified for each domain. Themes describe participants''

experience of each of the Candidacy domains. Each theme is supported by quotes (E.g. 'Quote 1') which are charted in and can be referred to in Table 2. Quotes were selected on the basis of relevance to statements they are supporting within each theme."

We have left the identifiers as is standard qualitative practice to provide context to about the participant. Out participants were recruited from one Australia's largest joint replacement service so we do not believe there is any risk for identification.

11. The discussion section could have been tighter and more specifically related to the Candidacy framework. The authors have also missed an opportunity to comment on the usefulness of the candidacy framework. Such commentary, including suggestions for improving the candidacy framework, should be added to the discussion section.

We have addressed this comment in a previous response. Please see our response to reviewer 1, comment 1.

12. Mentioning another study in the strengths and limitations section was confusing and unnecessary. It is also unclear what the authors mean in this section by having undergone a previous TKR may have affected "[participants] ability to recall previous experiences…."

We have removed this sentence. We believe that introducing the Barlow study into the strength and limitations is a good example of our findings being relevant to other settings.

VERSION 2 – REVIEW

REVIEWER	Alba Realpe Population Health Sciences Bristol Medical School University of Bristol UK
REVIEW RETURNED	16-Aug-2019

GENERAL COMMENTS	I would like to thank the authors for changes made to the manuscript in response to reviewers' feedback. I think the paper has improved as a result, its message has been refined and methods to answer the research question explained in detailed and more consistently. The aim in the abstract is wordy and difficult to follow, whereas it is more clearly stated in the background section. I suggest you use this version in the abstract as well. The sentence in lines 87-88: "Understanding how patients receive health information is critical to understanding patients' engagement in non-surgical interventions and decision to progress to TKR" . This is a confusing. Is it about what information patients received or patients' reaction to the information that is critical to understand? The use of 'understanding' makes this sentence difficult to read. I understood the message of the paper is that the use of the candidacy framework to analyse patients' experiences in deciding to progress to TKR highlighted missed opportunities in primary care services to orient patients to try first non-surgical interventions. If this is the message, I would suggest the authors make it more explicit in the conclusion and abstract.

VERSION 2 – AUTHOR RESPONSE

Reviewer: 1
Reviewer Name: Alba Realpe

1.	The aim in the abstract is wordy and difficult to follow, whereas it is more clearly stated in the background section. I suggest you use this version in the abstract as well.

Thank you for the suggestion to clarify the aim stated in the abstract; we have used the aim stated in the background section as suggested. Please see updated abstract page 2, line 26-29:

“The aim of our study was to explore patient factors that impact on the decision to progress to total knee replacement (TKR), including the experience of patients in general practice, their perceptions of their condition and their access and use of community-based allied health interventions.”

2.	The sentence in lines 87-88: "Understanding how patients receive health information is critical to understanding patients’ engagement in non-surgical interventions and decision to progress to TKR". This is a confusing. Is it about what information patients received or patients’ reaction to the information that is critical to understand? The use of ‘understanding’ makes this sentence difficult to read.

We thank the reviewer for this comment and have clarified this sentence on page 5, line 88-89:

“Where patients receive health information and how it is delivered is a critical element in understanding patients’ engagement in non-surgical interventions and decision to progress to TKR.”

3.	I understood the message of the paper is that the use of the candidacy framework to analyse patients' experiences in deciding to progress to TKR highlighted missed opportunities in primary care services to orient patients to try first non-surgical interventions. If this is the message, I would suggest the authors make it more explicit in the conclusion and abstract.

We thank the reviewer for the opportunity to clarify this important point.

We have refined the abstract on page 2, line 44-47:

“Conclusions: Use of the Candidacy framework to analyse patients’ experiences when deciding to progress to TKR highlighted missed opportunities in general practice to orient patients to first try non-surgical interventions. Patients with knee OA also require improved support to navigate allied health services.”

We have also added a statement to the conclusion to clarify the overall message of the paper on page 18-19, line 381-383:

“Use of the Candidacy framework to analyse patients’ experiences when deciding to progress to TKR highlighted missed opportunities in general practice to orient patients to first try non-surgical interventions.”