PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (see an example) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below. Some articles will have been accepted based in part or entirely on reviews undertaken for other BMJ Group journals. These will be reproduced where possible.

ARTICLE DETAILS

TITLE (PROVISIONAL)	An exploratory qualitative interview study about collaboration between medicine and dentistry in relation to diabetes management.
AUTHORS	Bissett, Susan; Stone, Kerry; Rapley, Tim; Preshaw, Philip

VERSION 1 - REVIEW

REVIEWER	Margaret Stone (Dr) Senior Research Fellow University of Leicester UK I declare that I have no conflict of interest to declare in relation to reviewing this article.
REVIEW RETURNED	26-Oct-2012

REPORTING & ETHICS	A checklist for quality of reporting qualitative research does exist. This is not specifically referred to, but in general the authors cover the main points.
GENERAL COMMENTS	The authors present some useful descriptive findings from their thematic analysis of interview data relating to knowledge and perceptions about the link between diabetes and periodontitis. Although the analysis and interpretation are basic, qualitative studies focusing on this topic are lacking, so the paper has the merit of originality. Some practical implications of the findings are presented. The writing style is generally good, but a few errors need correcting. The case for a beneficial effect of treating periodontitis in terms of glycaemic control is perhaps overstated by the authors. Although the referenced Cochrane review suggests potential benefit, and feasible mechanisms have been proposed, the Cochrane authors noted the limitations of the available studies and concluded that further evidence was needed. The limited level of benefit (compared, for example, to the effects of weight reduction) might also usefully be acknowledged. Introduction Page 5 Paragraph 1, line 5 - it needs to be clarified that the North of England has the highest prevalence … in England. Paragraph 1, line 6 – 1990s not 1990's Paragraph 1, last sentence - it is now considered preferable to refer to 'people with diabetes' rather than 'diabetics' (this also needs to be checked in the remainder of the paper). Also, the wording of the phrase 'similar to other ….' suggests that periodontitis is a vascular complication. Page 6 Paragraph 2, line 2 – the phrase 'regarding controlling' needs rewording (for example, as 'about controlling' or 'regarding control

	of') Paragraph 3, line 4 – for readability, 'this' needs to be followed by a word such as 'perception' Final paragraph – it would be useful for the authors to state whether they searched for similar studies and whether or not any were found. Methods: Page 7 Data collection and data analysis need to be distinguished. Interviewing and audio recording are methods of data collection. Paragraph 1, line 3 – diabetes (not diabetic) nurse specialist Paragraph 2, line 3 - … ensure that … Paragraph 2, line 4 - … an a priori. Sentence beginning 'Framework ….' – readability would be improved by replacing one instance of the use of 'relating to'. Paragraph 2, penultimate sentence - 'pioneering' is an unusual choice of words in describing the development of a thematic framework; 'initial' would be an alternative. Findings: It might be preferable to refer to medical healthcare providers / professionals rather than 'medics'. The authors need to be clear in terms of distinguishing their own reflections and the reported perceptions of participants, for example, in the sentence beginning 'The limited resources…' on page 10, first paragraph. In this type of descriptive paper, reflections would best placed in the discussion. Although there are one or two brief quotations from patient participants within the text, there are none presented in the boxes. This seems unbalanced in a paper that claims to report the views of both patients and healthcare providers. It might, for example, be useful to include one 'boxed' quote illustrating lack of knowledge in patients and one in the final box to illustrate the suggestion that patients would appreciate collaboration between dental and medical healthcare providers in terms of consistent messages. Page 9 Paragraph 2, line 3 – it would be useful to clarify whether the 2 participants who had not heard of the link were patients or healthcare providers. Discussion: The authors should avoid reiteration of information that has already been covered in the introduction. The discussion should focus on their own findings rather than background. A structured abstract with subheadings can be helpful and is recommended by some journals. The authors may wish to consider whether it would be useful to make any comparisons with the way in which eye care for people with diabetes is provided (including retinal screening and costs to patients). The comparative seriousness of complications associated with neglect of eye care / dental care might be considered; it is unlikely that a specific regular recall programme of dental screening for people with diabetes (for example, with a hygienist, as suggested by the authors) would be financially warranted in the absence of stronger evidence for substantial benefit. However, the authors could make more of their suggestion that a very low intensity intervention involving some relevant questions in regular diabetes review appointments might be feasible and potentially effective. An alternative, even less costly, intervention, would be relevant posters and/or leaflets displayed in general practice waiting rooms and diabetes outpatient clinics in hospitals.

	Another issue that might be discussed is the (possible) relative ease / acceptability of a self-care behaviour based on improved dental care, compared, for example, to modifying diet, increasing exercise or actively trying to lose weight. Areas for future research might be considered, for example, using the findings of this study to design a questionnaire survey to capture a broader range of views; a trial of the impact of a low intensity education / information intervention; qualitative or survey research to gather similar information from dentists and others working in the field of oral health. Page 12 First paragraph last sentence – an apostrophe is not needed after healthcare professionals if used in this way. However, it needs to be clarified that these participants' accounts suggested that they were ….. Page 15 The sentence beginning 'Education…' would benefit from rewording for improved clarity and readability (for example '….but, without other measures, it will not….' replacing 'alone' at the end of the sentence).

REVIEWER	Nicholas Jenkins, PhD Chancellor's Fellow School of Health in Social Science University of Edinburgh Teviot Place EH8 9AG
REVIEW RETURNED	05-Nov-2012

THE STUDY	My main concerns surround the nature of the study design. The findings are based on a very small sample (n=17). The authors mention that these participants were 'purposefully sampled' yet they do not detail the inclusion criteria used. This makes it impossible to ascertain why so few participants from each group were selected (4 patients, 4 dental professionals, 4 GPs, 3 diabetes nurses and 2 diabetologists). In the same paragraph, the authors then say the sample was arrived at via snowball sampling, as opposed to purposive sampling, making the overall design unclear. Basic information about the sample and the study is missing. For example, do the patients have type 1 or type 2 diabetes? How long were the interviews? When were the data collected?
RESULTS & CONCLUSIONS	In my opinion, the study design (small number of qualitative interviews within one region in the UK) cannot be used to support borad claims made in the paper e.g. that 'Diabetes healthcare providers have insufficient knowledge regarding the links between periodontitis and diabetes. It would appear to me that a survey design would be more appropriate to exploring such a hypothesis. Very little space is given to the patient data and I am unsure as to what these interviews contribute to the overall analysis - which appears much more focused on professional knowledge and practice
REPORTING & ETHICS	Details of ethical review/approval are needed (e.g. name of Ethics committee and decision reference number)
GENERAL COMMENTS	This is an interesting and under-researched area and the authors present some insightful data. The paper is also well structured.

	However, I am unconvinced as to the rationale for the study design and I do not believe the design and data support the conclusions drawn. Interviews with such a small number of patients, GPs, nurses and diabetologists located in one area of the UK are unlikely to provide a sample sufficient to cover the full bredth of knowledge and experience that is likely to exist. Without any in-depth explanation as to the rationale for such a small sample and/or details of sample's characteristics (e.g. the purposive sampling criteria used, whether patients had type 1 or type 2 diabetes etc) it is impossible to see how the study design supports the very broad conclusions drawn; for example, that 'diabetes healthcare professionals have insufficient knowledge regarding the links between periodontitis and diabetes', that evidence has 'virtually no impact on most health professionals' or that 'people with diabetes want to be better informed about all possible complications ....' I suggest modifying these conclusions to ones that better fit the study design (perhaps based on the interesting, emergent distinctions the authors make between uncertain, unworkable and isolated knowledge in this field). In addition, much clearer information about the patient sample (e.g. T1DM or T2DM, HbA1c control at interview, age, gender, number of years since diagnosis) is needed, as is a clear rationale for their inclusion in the study as, currently, very little data from this group are included.

REVIEWER	Søren Jepsen Profesor and Chairman Dept. of Periodontology, Operative and Preventive Dentistry University of Bonn Germany
REVIEW RETURNED	20-Nov-2012

THE STUDY	There are some suggestions for changes and additions which should be incorporated in a revised version of the manuscript: 1. Article summary, strengths and weaknesses, last point bottom of page 3: „The limited knowledge...“ reads more like a key message than as strength or weakness... Please rephrase. 2. Introduction: Add a section regarding the study design (Qualitative interview study, framework analysis) as established research tool in social sciences because readers with a medical background may not be familiar with this approach.
RESULTS & CONCLUSIONS	3. Results: What was the outcome for dental professionals? 4. Discussion: Please include discussion on aspects that could be perceived as weaknesses: relatively few number of participants, selection bias of participants, biased questioning, generalizability of results... 5. Discussion: Please add a section on implications for future research, i.e. development of a questionaire based on the outcomes of this study which could be distributed to a large number of health care providers in the different fields. This would possibly result in more complete information about the gaps in knowledge among health care providers and more robust quantitative data.
GENERAL COMMENTS	The present manuscript is well written and contains very important information on the link between diabetes and periodontitis that deserves publication in a medical journal. There is emerging evidence to support the existence of a two-way

	relationship between diabetes and periodontitis, with diabetes increasing the risk for periodontitis, and periodontal inflammation negatively affecting glycaemic control. This bi-directional relationship between diabetes mellitus and periodontitis is now widely accepted by periodontal researchers and clinicians all over the world . The evidence linking diabetes and periodontitis, however, may not be well known among diabetes care providers. The authors have done a fine job exploring this perceived lack of knowledge further.

VERSION 1 – AUTHOR RESPONSE

REVIEWER 1
Reviewer: Margaret Stone

1. A checklist for quality of reporting qualitative research does exist. This is not specifically referred to, but in general the authors cover the main points.
General comments:
The authors present some useful descriptive findings from their thematic analysis of interview data relating to knowledge and perceptions about the link between diabetes and periodontitis. Although the analysis and interpretation are basic, qualitative studies focusing on this topic are lacking, so the paper has the merit of originality. Some practical implications of the findings are presented. The writing style is generally good, but a few errors need correcting.

RESPONSE: Thank you for this – we also agree that qualitative studies in this topic are lacking and are glad the reviewer feels that our paper is useful.

2. The case for a beneficial effect of treating periodontitis in terms of glycaemic control is perhaps overstated by the authors. Although the referenced Cochrane review suggests potential benefit, and feasible mechanisms have been proposed, the Cochrane authors noted the limitations of the available studies and concluded that further evidence was needed. The limited level of benefit (compared, for example, to the effects of weight reduction) might also usefully be acknowledged.

RESPONSE: We have inserted a sentence in the discussion to emphasise that the improvements in HbA1c following periodontal therapy are modest, but they could be clinically relevant, and are similar to HbA1c reductions which result from other diabetes therapies.

3. Introduction

Page 5
Paragraph 1, line 5 - it needs to be clarified that the North of England has the highest prevalence … in England. DONE.
Paragraph 1, line 6 – 1990s not 1990's DONE
Paragraph 1, last sentence - it is now considered preferable to refer to 'people with diabetes' rather than 'diabetics' (this also needs to be checked in the remainder of the paper). DONE.
Also, the wording of the phrase 'similar to other ….' suggests that periodontitis is a vascular complication.
RESPONSE: This phrase has been re-written to improve clarity

Page 6
Paragraph 2, line 2 – the phrase 'regarding controlling' needs rewording (for example, as 'about controlling' or 'regarding control of') DONE

Paragraph 3, line 4 – for readability, ‘this’ needs to be followed by a word such as ‘perception’ DONE
Final paragraph – it would be useful for the authors to state whether they searched for similar studies and whether or not any were found. DONE.

Methods:

Page 7
Data collection and data analysis need to be distinguished. Interviewing and audio recording are methods of data collection. DONE
Paragraph 1, line 3 – diabetes (not diabetic) nurse specialist DONE
Paragraph 2, line 3 - … ensure that … DONE
Paragraph 2, line 4 - … an a priori. DONE
Sentence beginning ‘Framework ….’ – readability would be improved by replacing one instance of the use of ‘relating to’. DONE
Paragraph 2, penultimate sentence - ‘pioneering’ is an unusual choice of words in describing the development of a thematic framework; ‘initial’ would be an alternative. DONE

Findings:
It might be preferable to refer to medical healthcare providers / professionals rather than ‘medics’. DONE

RESPONSE: All the above changes have been made in the text using Track Changes

4. The authors need to be clear in terms of distinguishing their own reflections and the reported perceptions of participants, for example, in the sentence beginning ‘The limited resources…’ on page 10, first paragraph. In this type of descriptive paper, reflections would best placed in the discussion.

RESPONSE: This wording actually resulted directly from one of the interviews. We have amended the text to make this clearer.

5. Although there are one or two brief quotations from patient participants within the text, there are none presented in the boxes. This seems unbalanced in a paper that claims to report the views of both patients and healthcare providers. It might, for example, be useful to include one ‘boxed’ quote illustrating lack of knowledge in patients and one in the final box to illustrate the suggestion that patients would appreciate collaboration between dental and medical healthcare providers in terms of consistent messages.

RESPONSE: Thank you for this very helpful suggestion. We have added patient quotes to box 1 and box 3 to illustrate these points, and have also referred to these quotations in the results section.

6. Page 9
Paragraph 2, line 3 – it would be useful to clarify whether the 2 participants who had not heard of the link were patients or healthcare providers.

RESPONSE: We have clarified the text to explain that 2 diabetes nurse specialists and one patient had not previously been aware of the link between diabetes and periodontitis.

7. Discussion:

The authors should avoid reiteration of information that has already been covered in the introduction. The discussion should focus on their own findings rather than background.

RESPONSE: As a result of all the other amendments to the text that we have made, and having reviewed the discussion again in detail, reiteration of information and duplications have now been eliminated.

8. A structured abstract with subheadings can be helpful and is recommended by some journals.

RESPONSE: A structured abstract has been provided.

9. The authors may wish to consider whether it would be useful to make any comparisons with the way in which eye care for people with diabetes is provided (including retinal screening and costs to patients). The comparative seriousness of complications associated with neglect of eye care / dental care might be considered; it is unlikely that a specific regular recall programme of dental screening for people with diabetes (for example, with a hygienist, as suggested by the authors) would be financially warranted in the absence of stronger evidence for substantial benefit. However, the authors could make more of their suggestion that a very low intensity intervention involving some relevant questions in regular diabetes review appointments might be feasible and potentially effective. An alternative, even less costly, intervention, would be relevant posters and/or leaflets displayed in general practice waiting rooms and diabetes outpatient clinics in hospitals. Another issue that might be discussed is the (possible) relative ease / acceptability of a self-care behaviour based on improved dental care, compared, for example, to modifying diet, increasing exercise or actively trying to lose weight. Areas for future research might be considered, for example, using the findings of this study to design a questionnaire survey to capture a broader range of views; a trial of the impact of a low intensity education / information intervention; qualitative or survey research to gather similar information from dentists and others working in the field of oral health.

RESPONSE: We have addressed these issues in the final paragraph of the discussion and changed the text accordingly. The issues raised relating to assessing other complications of diabetes (e.g. retinal screening), the use of posters, the seriousness/severity of other complications as compared to oral complications of diabetes, and the inclusion of dental hygienists in diabetes care teams are all complex issues that could involve a lot of discussion, and that were not specifically addressed in our research. Therefore, we have limited the discussion to keep it short, and have suggested some avenues for future research that may address these issues.

10. Page 12
First paragraph last sentence – an apostrophe is not needed after healthcare professionals if used in this way. However, it needs to be clarified that these participants' accounts suggested that they were ….. DONE

Page 15
The sentence beginning 'Education…' would benefit from rewording for improved clarity and readability (for example '….but, without other measures, it will not….' replacing 'alone' at the end of the sentence). DONE

REVIEWER 2

Reviewer: Nicholas Jenkins, PhD

1. The findings are based on a very small sample (n=17). The authors mention that these participants were 'purposefully sampled' yet they do not detail the inclusion criteria used. This makes it impossible to ascertain why so few participants from each group were selected (4 patients, 4 dental professionals, 4 GPs, 3 diabetes nurses and 2 diabetologists). In the same paragraph, the authors then say the sample was arrived at via snowball sampling, as opposed to purposive sampling, making the overall design unclear.

RESPONSE: We apologise for the confusion. We have now added a reference in order to clarify how we categorise our sampling. Following Patton (2002) we see purposeful sampling as an umbrella term for a range of sampling strategies – in this way, snowball sampling is just one of the 16 strategies he outlines under the heading of purposeful sampling. We realise that other authors, for example Gobo (2004), adopt a different categorization scheme.

We have also outlined the logic behind our sampling strategies. As our data collection and analysis progressed, our emergent findings suggested that we needed to focus on the range of key stakeholders in a diabetes care pathway. Clearly, although we do not note this in the manuscript, we could have sampled for other key actors, for example carers. In this way our sampling strategy sought to explore the variance in the (emergent) phenomenon.

2. Basic information about the sample and the study is missing. For example, do the patients have type 1 or type 2 diabetes? How long were the interviews? When were the data collected?

RESPONSE: These details have been included in the manuscript.

3. In my opinion, the study design (small number of qualitative interviews within one region in the UK) cannot be used to support borad claims made in the paper e.g. that 'Diabetes healthcare providers have insufficient knowledge regarding the links between periodontitis and diabetes. It would appear to me that a survey design would be more appropriate to exploring such a hypothesis.

RESPONSE: We have tempered the claims made in the manuscript in the discussion section to reflect that these findings were specific to our study population, and also to suggest that future research might involve a questionnaire survey to more broadly assess the issues raised by our research.

4. Very little space is given to the patient data and I am unsure as to what these interviews contribute to the overall analysis - which appears much more focused on professional knowledge and practice.

RESPONSE: This is an important point, and was also raised by Reviewer 1. We have expanded boxes 1 and 3 to give more prominence to the patient interviews. We should also note that the interviews with patients where central in the trajectory of our sampling strategy, analytic work and emergent focus on the distribution of knowledge across the care pathway.

5. Details of ethical review/approval are needed (e.g. name of Ethics committee and decision reference number) -

RESPONSE: These data were provided on page 3 of the manuscript.

6. This is an interesting and under-researched area and the authors present some insightful data. The paper is also well structured. However, I am unconvinced as to the rationale for the study design and I do not believe the design and data support the conclusions drawn. Interviews with such a small number of patients, GPs, nurses and diabetologists located in one area of the UK are unlikely to provide a sample sufficient to cover the full bredth of knowledge and experience that is likely to exist. Without any in-depth explanation as to the rationale for such a small sample and/or details of sample's characteristics (e.g. the purposive sampling criteria used, whether patients had type 1 or type 2 diabetes etc) it is impossible to see how the study design supports the very broad conclusions drawn; for example, that 'diabetes healthcare professionals have insufficient knowledge regarding the links between periodontitis and diabetes', that evidence has 'virtually no impact on most health professionals' or that 'people with diabetes want to be better informed about all possible complications ....'
I suggest modifying these conclusions to ones that better fit the study design (perhaps based on the interesting, emergent distinctions the authors make between uncertain, unworkable and isolated knowledge in this field).

RESPONSE: We agree and we now have made more modest claims in the discussion and conclusion of the paper.

7. In addition, much clearer information about the patient sample (e.g. T1DM or T2DM, HbA1c control at interview, age, gender, number of years since diagnosis) is needed, as is a clear rationale for their inclusion in the study as, currently, very little data from this group are included.

RESPONSE: Thank you for this important suggestion. We have included these details into the results section.

REVIEWER 3
Reviewer: Søren Jepsen

1. Article summary, strengths and weaknesses, last point bottom of page 13: „The limited knowledge...“ reads more like a key message than as strength or weakness... Please rephrase

RESPONSE: We have amended this text to improve clarity.

2. Introduction: Add a section regarding the study design (Qualitative interview study, framework analysis) as established research tool in social sciences because readers with a medical background may not be familiar with this approach

RESPONSE: We have added a single sentence on this and included a key reference for those that seek to explore the issue further.

3. Results: What was the outcome for dental professionals?

RESPONSE: The dental professionals did report that they are aware of the links between diabetes and periodontitis. We have clarified this in the text.

4. Discussion: Please include discussion on aspects that could be perceived as weaknesses: relatively few number of participants, selection bias of participants, biased questioning, generalizability of results.

RESPONSE: We have added text to the discussion section to highlight the limitations of this research.

5. Discussion: Please add a section on implications for future research, i.e. development of a questionaire based on the outcomes of this study which could be distributed to a large number of health care providers in the different fields. This would possibly result in more complete information about the gaps in knowledge among health care providers and more robust quantitative data.

RESPONSE: These issues have also already been addressed in response to the comments from Reviewers 1 and 2, and the text has been amended accordingly.

6. The present manuscript is well written and contains very important information on the link between diabetes and periodontitis that deserves publication in a medical journal. There is emerging evidence to support the existence of a two-way relationship between diabetes and periodontitis, with diabetes increasing the risk for periodontitis, and periodontal inflammation negatively affecting glycaemic control. This bi-directional relationship between diabetes mellitus and periodontitis is now widely accepted by periodontal researchers and clinicians all over the world. The evidence linking diabetes and periodontitis, however, may not be well known among diabetes care providers. The authors have done a fine job exploring this perceived lack of knowledge further.

RESPONSE: Thank you for these supportive comments.

VERSION 2 – REVIEW

REVIEWER	Dr Margaret Stone Senior Research fellow University of Leiceste, UK I have no conflict of interest to declare in relation to this paper
REVIEW RETURNED	10-Jan-2013

THE STUDY	Some questions are not relevant to qualitative studies
REPORTING & ETHICS	As stated for the previous version, in general the study reporting is in line with relevant guidance, althouth this has not been formally checked by the authors.
GENERAL COMMENTS	The authors have conscientiously considered the comments made and they have made appropriate revisions which have improved the paper considerably. The very minor points listed below could probably be considered as optional changes and I don't feel that the paper needs further review. Incidentally, I apologise to the authors for what must have seemed like a confusing comment in my previous review - in my suggestions about the discussion section I mentioned the possibility of a 'structured abstact' (what I meant was a structured discussion section, I am sorry for this typo) - I think that the revised discussion is much improved. Minor points: Page 5 - second para - 'that' is needed between 'confirm' and 'reductions' in the sentence beginning 'Meta-analyses...' Page 7 - first para, 5th line up - 'in' is needed between 'involved' and 'diabetes management' page 9 - third para, 3rd line down - 'Three' should be in words not numbers at the beginning of a sentence Page 11 - 4th line from bottom of page - consider changing 'medics' to 'doctors' Page 12 - first line - the authors have now clarified that the three

	participants who claimed never to have heard of the link between diabetes and periodontitis included one patient (of four interviewed). It seems that three patient participants therefore had some understanding prior to the interview. I wonder whether these three patients were specifically asked about the source of this knowledge. In any event, the authors may need to consider whether the observation that 'patients did not have access to this knowledge' needs revising, perhaps by saying that they appeared to have a poor level of access to timely, good quality knowledge (this would be supported by the quotation that has been added to Box 1) Page 15 - I would suggest a new paragraph after 'Inter-professional collaboration' -(middle of long paragraph) to break up the text. Page 15 - sixth line up from bottom of page -'then' is not needed before assessing.

REVIEWER	Nicholas Jenkins, PhD Chancellors Fellow University of Edinburgh
REVIEW RETURNED	04-Jan-2013

THE STUDY	I remain unconvinced as to the effectiveness of the sampling strategy, especially the snowball sampling of a small number of healthcare professionals and patients most of whom were already known to the researchers. The researchers claim that thematic saturation was achieved. However, it is not clear whether this is due to the limited diversity of patients, professionals who participated in the research. Thus, questions remain as to whether the sample adequately reflects the likely diversity of patients/practitioners' views, knowledge and experience.
REPORTING & ETHICS	The authors note that details of Ethical approval is provided in page three of the submission. I believe this information should ALSO be included in the methods section for clarity (PP: 7)
GENERAL COMMENTS	The authors have made considerable efforts to address the reviewers' comments and the paper is much improved as a result of this. I continue to have the following reservations: The authors state that 'saturation was acheived relatively early in the sampling'. Given the low numbers of patients and professionals interviewed and the sampling strategy adopted (which appeared to be based on selecting patients and professionals, many of whom were already known to the researchers) questions remain as to whether the data fully reflects the likely diversity of views, knowledge and experience. For example, I note only one patient with T1DM was interviewed. Is it not possible that patients with T1DM may be more likely to know about the risks of periodontitis and/or have different experiences of oral health self management than those with T2DM? I fail to see how interviewing one patient with T1DM would have sufficiently answered this question. Given the inductive and emergent nature of the sampling strategy, why wasn't a greater balance/diversity of patient perspectives sought? Given the nature of the sampling strategy issues of 'bias' needs to be addressed. In the discussion section, the authors highlight how interviewees suggested 'peer led discussion forums', commercially supported

	network events' etc. are potential ways of raising awareness, yet these data do not appear to be highlighted in the results section. I take the point that details of ethical approval are provided on P: 3 but would recomment re-iterating this information on P: 7 for clarity.

VERSION 2 – AUTHOR RESPONSE

Reviewer: Nicholas Jenkins, PhD
Chancellors Fellow
University of Edinburgh

I remain unconvinced as to the effectiveness of the sampling strategy, especially the snowball sampling of a small number of healthcare professionals and patients most of whom were already known to the researchers. The researchers claim that thematic saturation was achieved. However, it is not clear whether this is due to the limited diversity of patients, professionals who participated in the research. Thus, questions remain as to whether the sample adequately reflects the likely diversity of patients/practitioners' views, knowledge and experience.

RESPONSE: We accept these reservations in relation to thematic saturation, and we have removed reference to data saturation, and also emphasised that more research is needed.

The authors note that details of Ethical approval is provided in page three of the submission. I believe this information should ALSO be included in the methods section for clarity (PP: 7)

RESPONSE: Details of the ethical approval are also listed in the methods section now.

The authors have made considerable efforts to address the reviewers' comments and the paper is much improved as a result of this.

RESPONSE: thank you for these positive comments

I continue to have the following reservations:

The authors state that 'saturation was acheived relatively early in the sampling'. Given the low numbers of patients and professionals interviewed and the sampling strategy adopted (which appeared to be based on selecting patients and professionals, many of whom were already known to the researchers) questions remain as to whether the data fully reflects the likely diversity of views, knowledge and experience. For example, I note only one patient with T1DM was interviewed. Is it not possible that patients with T1DM may be more likely to know about the risks of periodontitis and/or have different experiences of oral health self management than those with T2DM? I fail to see how interviewing one patient with T1DM would have sufficiently answered this question. Given the inductive and emergent nature of the sampling strategy, why wasn't a greater balance/diversity of patient perspectives sought?
Given the nature of the sampling strategy issues of 'bias' needs to be addressed.

RESPONSE: We accept the reservations in respect of saturation, and we have removed the reference to data saturation in the text. Regarding the point about patients, and whether those with T1DM might be more likely to know about the risks of periodontitis than patients with T2DM, we have acknowledged that more research is needed to include a broader range of patients, with both T1DM and T2DM. We have also acknowledged the potential for bias in this relatively small sample, while also confirming that the consistent findings that we obtained indicate the need for further research,

which we hope this paper will stimulate.

In the discussion section, the authors highlight how interviewees suggested 'peer led discussion forums', commercially supported network events' etc. are potential ways of raising awareness, yet these data do not appear to be highlighted in the results section.

RESPONSE: During the analysis, the strongest emergent themes related to the knowledge of interviewees about the links between diabetes and periodontitis, and the complexities of how to address this within the constraints of the healthcare system. These aspects were therefore described in detail in the results section, rather than suggestions that some of the interviewees made about options for improving knowledge and changing clinical practice. However, we did feel it was worthwhile mentioning some suggestions that were made by participants for improving knowledge, such as discussion forums etc, in the discussion section, to potentially stimulate further work in this area.

I take the point that details of ethical approval are provided on P: 3 but would recomment re-iterating this information on P: 7 for clarity.

RESPONSE: As mentioned above, details of the ethical approval are also listed in the methods section now.

An interesting study into an under-researched area. The themes emerging from the interviews are interesting and provide a useful platform for further research. I suggest removing claims to 'data saturation' and highlighting the need for further, more in-depth research into the nature of T1DM and T2DM patients' self-management experiences of oral health.

RESPONSE: Thank you for these positive and supportive comments, and we also hope that this paper will provide a useful platform for future research. We have now removed references to the concept of saturation. The comment about patients with T1DM is well made – as mentioned above, we have included a sentence on the need for further research with patients with T1DM and T2DM.

Reviewer: Dr Margaret Stone
Senior Research fellow
University of Leicester, UK

I have no conflict of interest to declare in relation to this paper

As stated for the previous version, in general the study reporting is in line with relevant guidance, althouth this has not been formally checked by the authors.

The authors have conscientiously considered the comments made and they have made appropriate revisions which have improved the paper considerably. The very minor points listed below could probably be considered as optional changes and I don't feel that the paper needs further review. Incidentally, I apologise to the authors for what must have seemed like a confusing comment in my previous review - in my suggestions about the discussion section I mentioned the possibility of a 'structured abstact' (what I meant was a structured discussion section, I am sorry for this typo) - I think

that the revised discussion is much improved.

Minor points:
Page 5 - second para - 'that' is needed between 'confirm' and 'reductions' in the sentence beginning 'Meta-analyses...' DONE
Page 7 - first para, 5th line up - 'in' is needed between 'involved' and 'diabetes management' DONE
page 9 - third para, 3rd line down - 'Three' should be in words not numbers at the beginning of a sentence DONE
Page 11 - 4th line from bottom of page - consider changing 'medics' to 'doctors' DONE
Page 12 - first line - the authors have now clarified that the three participants who claimed never to have heard of the link between diabetes and periodontitis included one patient (of four interviewed). It seems that three patient participants therefore had some understanding prior to the interview. I wonder whether these three patients were specifically asked about the source of this knowledge. In any event, the authors may need to consider whether the observation that 'patients did not have access to this knowledge' needs revising, perhaps by saying that they appeared to have a poor level of access to timely, good quality knowledge (this would be supported by the quotation that has been added to Box 1) DONE
Page 15 - I would suggest a new paragraph after 'Inter-professional collaboration' -(middle of long paragraph) to break up the text. DONE
Page 15 - sixth line up from bottom of page -'then' is not needed before assessing. DONE

RESPONSE: all the above changes have been made – thank you for the very helpful and supportive comments.