PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (**http://bmjopen.bmj.com/site/about/resources/checklist.pdf**) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

TITLE (PROVISIONAL)	A CROSS-SECTIONAL STUDY OF THE FINANCIAL COST OF TRAINING TO THE SURGICAL TRAINEE IN THE UK AND IRELAND
AUTHORS	O'Callaghan, John; Mohan, Helen; Sharrock, Anna; Gokani, Vimal; Fitzgerald, J; Williams, Adam; Harries, Rhiannon

VERSION 1 – REVIEW

REVIEWER	Jeff Steiner, DO, MBA UT Southwestern Medical Center United States No Competing Interest
REVIEW RETURNED	10-Jul-2017

GENERAL COMMENTS	Thank you for doing this study. It is important to see how personal economics have professional implications. This was also good to see because those outside the UK assume that medical school training is either “free” or very inexpensive because of the NHS. P2 L45 – have these results been adjusted for inflation? The UK has seen an average inflation rate of 2.58 from 1989 until 2017 P2 L54 – “reimbursed” Are there any costs that are reimbursed in their medical training? - Perhaps "not included in their training budget"? P4 L 35 – perhaps another limitation of the study is that those with significantly more debt will be more likely to respond. P5 L29 – I would recommend finding a citation for this … even some general document on JCST training. P5 L56 – What percentage will not be able to pay off the debt before the 30 year mark? P6 L10 – comment – great point about the CPI P7 L24 – would your readers know what “run-through training” is? P8 L40 – I would move this last sentence somewhere else – perhaps to the results section. P10 L13 – comment – I am always taken back how few responses are required for statistically significance with population studies such as this.

	P6 L11 – How many surveys were sent out? I would include that here. P14 L28 – do you have a citation for this statement? P14 L50- comment – interesting that that gaps in the training programme are passed onto the trainee to seek out training at their own expense. P16 L10 – comment – would it be appropriate to put a sub-header here titled "Recommendations"? P17 L8 – comment – great point about value and cost about doctors in training P17 L35 – are there any other ways to offset the cost to the doctors in training? P17 L 37 – comment – nice ending to this section P 3 L23 and P18 L35 – I don't know if you sufficiently showed that "improve work-life balance" would be improved with better funding. Perhaps "less debt load" should be included within the conclusions. Thank you, again. Best of Luck.

REVIEWER	Andrew Medvecz, MD, and Kyla Terhune, MD, MBA Vanderbilt University Medical Center, Nashville, Tennessee, USA Of note, I did work on this jointly with one of our surgical trainees, Andrew Medvecz.
REVIEW RETURNED	10-Aug-2017

GENERAL COMMENTS	Citing a decline in the number of applications for surgical trainee positions, the authors conducted a survey of surgical trainees throughout the United Kingdom and Ireland to assess costs that they are expected to pay for postgraduate training. As a trainee and surgeon in the United States, where the medial medical student debt in 2015 was reported to be $180,000 (USD), we found this to be an interesting review and comparison of the two systems and expenses incurred by trainees. Our own experience, compared to review of this manuscript, suggests that, although the debt at the conclusion of medical school in the United States is much greater, costs related to surgical training by residents (or consultants-to-be) in the United States are much less compared to the UK, as reported in this manuscript. The authors distributed the survey to multiple mailing lists for surgical trainee and specialty associations. The results suggest that there are expenses that are mandatory for completion of surgical training that are not subsidized by Local Education Training Boards or Health Service Executive and are the responsibility of the surgical trainee. The authors use a combination of survey data and as well as other resources to calculate the costs of course and conference costs and argue that these costs should potentially be covered by Local Education and Training Boards.

	Comments • The response rate is able to be calculated from the total number of potential trainees that the authors list (page 8, line 39), but the authors should provide a response rate in both the abstract and the results. Also, it appears that there were 1603 surveys submitted by only 848 completed. Was there a range of completion that was required? Elimination of almost half of those submitted is concerning. • The survey is not included in the document, so we did not have the opportunity to review this. It would be beneficial to include the survey as a figure and supplement so that readers can know the questions that were asked. • The strengths and limitations of the study are listed together. As a minor suggestion, it would be easier to read if it were stratified by strengths, followed by weaknesses. • The description of participants and setting in the methods section requires significant revision. Although this may be helpful for the international reader, depending on the audience, there may be significant extra information that is not relevant to the goal of establishing the costs that surgical trainees are paying. • It would be helpful if the authors were to provide more granular information as to what costs are mandatory and what costs are optional (page 14 line 33). This could be done in tabular format. For the costs incurred which are optional, does this suggest a difference in training experience that trainees feel much be supplemented? Rather than a mean, it would be helpful to know how many incur minimal costs and how many incur maximal (e.g. multiple optional courses). • The authors discuss variations in study budgets based on regional variations which are not pertinent to the initial study aim to determine the costs incurred by surgical trainees. This section could be eliminated from the discussion with focus remaining on the financial burden of training to become a surgeon. • On page 16 line 11, the authors state that doctors must be more aware of the potential costs that they will incur during their training. Does the JCST not provide estimates of these costs based on the guidance described on page 10 lines 31 and 35? Why is there a discrepancy? • It would be a helpful international reference for the authors to also list a range of expected salaries once trainees have reached consultant status. • It was a surprise that 47% of trainees reported obtaining an additional postgraduate degree. For future studies, it would be interesting to know why these were pursued and if these contributed to additional subsequent earnings or if they were pursued because of a concern that a medical degree and surgical training was not enough. • CCT is first defined on page 12 but utilized much earlier. Please define earlier for international readers. Recommendation: Minor Revisions Required

VERSION 1 – AUTHOR RESPONSE

Reviewer: 1
Reviewer Name: Jeff Steiner, DO, MBA
Institution and Country: UT Southwestern Medical Center, United States
Please state any competing interests: None

Please leave your comments for the authors below

Thank you for doing this study. It is important to see how personal economics have professional implications. This was also good to see because those outside the UK assume that medical school training is either "free" or very inexpensive because of the NHS.

Comment: P2 L45 – have these results been adjusted for inflation? The UK has seen an average inflation rate of 2.58 from 1989 until 2017

Response: No, these figures have not been adjusted for inflation. We would be unable to accurately do so.

Comment: P2 L54 – "reimbursed" Are there any costs that are reimbursed in their medical training? - Perhaps "not included in their training budget"?

Response: We have changed the wording to 'not covered by training budget'.

Comment: P4 L 35 – perhaps another limitation of the study is that those with significantly more debt will be more likely to respond.

Response: We have changed the wording to 'It is recognised that some costs could be subject to recall bias or an element of selection bias, in that those with significantly more debt may be more likely to respond, however the figures reported are largely consistent with the calculations we have made using the current prices of exams, courses and society memberships to verify the results.'

Comment: P5 L29 – I would recommend finding a citation for this … even some general document on JCST training.

Response: We are unsure what specifically the reviewer is recommending a citation for? In Appendix 3 we have detailed the costs of each of those mentioned in the sentence. It would be difficult to insert a citation as many costs can be variable i.e. the four surgical royal colleges have differing membership fees.

Comment: P5 L56 – What percentage will not be able to pay off the debt before the 30 year mark?

Response: The authors of the referenced paper have concluded that current medical school graduates obtaining a student loan for both tuition fees and maintenance will not repay the debt before the 30 year mark.

Comment: P6 L10 – comment – great point about the CPI

Response: We thank the reviewer for this comment.

Comment: P7 L24 – would your readers know what "run-through training" is?

Response: The sentence has been reworded ‘Competitive entry occurs prior to both Core and Higher specialist training levels, except for neurosurgery, cardiothoracic surgery and Oral and maxillofacial surgery (OMFS) in the UK (and trauma and orthopaedics in Scotland), where ‘run-through’ training (no separate selection process between core and higher specialist training) from Core level exists.’

Comment: P8 L40 – I would move this last sentence somewhere else – perhaps to the results section. The authors feel that this should remain in the methods section as it is not a direct result of the study.

Response: We have used a similar format when listing number of trainees for the year of survey distribution in other BMJ Open publications.
• Harries RL, Rashid M, Smitham P, Vesey A, McGregor R, Scheeres K, Bailey J, Afzhal Sohaib SM, Prior M, Frost J, Al-Deeb W, Kugathasan G, Gokani VJ. What shape do UK trainees want their training to be? Results of a cross-sectional study. BMJ Open 2016;6:e010461. doi:10.1136/bmjopen-2015-010461
• Harries RL, Gokani VJ, Smitham P, Fitzgerald JEF. Less Than Full-time Training in Surgery: A cross sectional study evaluating accessibility and experiences of flexible training in the surgical trainee workforce. BMJ Open 2016;6:e010136.doi:10.1136/bmjopen-2015-010136

Comment: P10 L13 – comment – I am always taken back how few responses are required for statistically significance with population studies such as this.

Response: We note the reviewers comment. As referenced in the manuscript the sample size is calculated according to validated published guidance.

Comment: P6 L11 – How many surveys were sent out? I would include that here.

Response: Unfortunately, there is no reliable way of calculating the number of surveys sent out, firstly, as it was distributed via multiple specialty association mailing lists which may contain duplicate contacts or those whose email address is no longer in use or unread, secondly, it was distributed via multiple social media platforms and the reach is therefore unknown. As discussed above we have published various studies of a similar nature within BMJ Open.

Comment: P14 L28 – do you have a citation for this statement?

Response: We are unsure as to what exactly the reviewer is suggesting a citation for. However, we have added the following to the sentence ‘Consultant surgeons-to-be now spend considerably more per year on courses than in the past, and these now represent the single largest training cost, according to our results.’

Comment: P14 L50- comment – interesting that that gaps in the training programme are passed onto the trainee to seek out training at their own expense.

Response: We thank the reviewer for the comment.

Comment: P16 L10 – comment – would it be appropriate to put a sub-header here titled “Recommendations”?

Response: Not all the discussion following this point is necessarily recommendations so we have not put in a sub-header title here. However, if the Editor feels this necessary we would be happy to oblige.

Comment: P17 L8 – comment – great point about value and cost about doctors in training

Response: We thank the reviewer for the comment.

Comment: P17 L35 – are there any other ways to offset the cost to the doctors in training?

Comment: P17 L 37 – comment – nice ending to this section

Response: We thank the reviewer for the comment.

Comment: P 3 L23 and P18 L35 – I don't know if you sufficiently showed that "improve work-life balance" would be improved with better funding. Perhaps "less debt load" should be included within the conclusions.

Response: This has been changed
Thank you, again. Best of Luck.

Reviewer: 2
Reviewer Name: Andrew Medvecz, MD, and Kyla Terhune, MD, MBA
Institution and Country: Vanderbilt University Medical Center, Nashville, Tennessee, USA
Please state any competing interests: None declared.

Of note, I did work on this jointly with one of our surgical trainees, Andrew Medvecz.

Citing a decline in the number of applications for surgical trainee positions, the authors conducted a survey of surgical trainees throughout the United Kingdom and Ireland to assess costs that they are expected to pay for postgraduate training. As a trainee and surgeon in the United States, where the medial medical student debt in 2015 was reported to be $180,000 (USD), we found this to be an interesting review and comparison of the two systems and expenses incurred by trainees. Our own experience, compared to review of this manuscript, suggests that, although the debt at the conclusion of medical school in the United States is much greater, costs related to surgical training by residents (or
consultants-to-be) in the United States are much less compared to the UK, as reported in this manuscript. The authors distributed the survey to multiple mailing lists for surgical trainee and specialty associations. The results suggest that there are expenses that are mandatory for completion of surgical training that are not subsidized by Local Education Training Boards or Health Service Executive and are the responsibility of the surgical trainee. The authors use a combination of survey data and as well as other resources to calculate the costs of course and conference costs and argue that these costs should potentially be covered by Local Education and Training Boards.

Comments
1. The response rate is able to be calculated from the total number of potential trainees that the authors list (page 8, line 39), but the authors should provide a response rate in both the
abstract and the results. Also, it appears that there were 1603 surveys submitted by only 848 completed. Was there a range of completion that was required? Elimination of almost half of those submitted is concerning.

Response: Whilst we include the total number of trainees in both UK and Ireland, it is possible that the survey did not reach all. Not all trainees would necessarily be on the mailing lists of the specialty associations that distributed. We therefore cannot give an accurate response rate.

We have included only fully completed surveys within data analysis, in a similar method to our previously published work in BMJ Open listed above. We believe that the need to have accurate costings at time of survey completion may be responsible for the number of surveys incomplete. We have added the following to the strengths and limitations section: 'We recognise that there is a significant number of surveys excluded due to incompletion, which we believe to be related to the need for accurate costings to compete the survey. However, the overall number of completed responses was higher than required to power the study.'

2. The survey is not included in the document, so we did not have the opportunity to review this. It would be beneficial to include the survey as a figure and supplement so that readers can know the questions that were asked.

Response: We have added this as an additional appendix (appendix 2)

3. The strengths and limitations of the study are listed together. As a minor suggestion, it would be easier to read if it were stratified by strengths, followed by weaknesses.

Response: We have altered the order of the strengths and limitations section

4. The description of participants and setting in the methods section requires significant revision. Although this may be helpful for the international reader, depending on the audience, there may be significant extra information that is not relevant to the goal of establishing the costs that surgical trainees are paying.

Response: We believe the detail in the participant and setting section is important to give information to the reader on how surgical training in the UK and Ireland compares to other countries. We do not feel there is 'extra information' that could be suitably removed.

5. It would be helpful if the authors were to provide more granular information as to what costs are mandatory and what costs are optional (page 14 line 33). This could be done in tabular format. For the costs incurred which are optional, does this suggest a difference in training experience that trainees feel must be supplemented?

Response: The breakdown of mandatory versus desirable elements to training are provided in Appendix 3. In reality those desirable or non-mandatory elements are all undertaken by UK and Irish trainees in order to make themselves appointable at the next level (i.e. higher surgical training if a core trainee, or consultant level if a higher surgical trainee) and therefore whilst not deemed mandatory are still expected and undertaken.

6. The authors discuss variations in study budgets based on regional variations which are not pertinent to the initial study aim to determine the costs incurred by surgical trainees. This section could be eliminated from the discussion with focus remaining on the financial burden of training to become a surgeon.

Response: We feel strongly that the issue of study budget variation should remain in the paper. A difference in the debt of surgical trainees should not be dependent on the region you live and work in. We also hope that by highlighting this issue in a public forum that action can be taken to eliminate this postcode lottery of study budgets.

7. On page 16 line 11, the authors state that doctors must be more aware of the potential costs that they will incur during their training. Does the JCST not provide estimates of these costs based on the guidance described on page 10 lines 31 and 35? Why is there a discrepancy?

Response: To date no estimate of the costs of surgical training in the UK and Ireland have been performed. The JCST Guidance for the requirements for CCT has only been introduced within the last few years, and some specialties guidance has been updated within the last 12 months. The JCST have not published an estimate of costs based on this guidance.

8. It would be a helpful international reference for the authors to also list a range of expected salaries once trainees have reached consultant status.

Response: This has been added to the discussion ‘Doctors need to be aware in advance of what their chosen pathway is likely to cost them, alongside the starting salary for consultant posts when they complete their training (ranging from £76,761 in the UK and £95,775 (€105,000) in Ireland18,19).’

9. It was a surprise that 47% of trainees reported obtaining an additional postgraduate degree. For future studies, it would be interesting to know why these were pursued and if these contributed to additional subsequent earnings or if they were pursued because of a concern that a medical degree and surgical training was not enough.

Response: We have added the following to the discussion ‘68% of later stage higher surgical trainees in the UK and 81% of Irish trainees report obtaining a higher degree. This was associated with an average cost estimated by respondents of over £18,000 and £22,000 in the UK and Ireland, respectively. Whilst it is not deemed mandatory by the JCST to undertake a higher degree within surgical training, there are a number of reasons why surgical trainees choose to undertake one. Firstly, it is required in order to practice as an academic consultant surgeon, and secondly, a significant proportion of trainees will undertake one in order to make themselves competitive for consultant appointment.’

10. CCT is first defined on page 12 but utilized much earlier. Please define earlier for international readers.

Response: This has been corrected
Recommendation: Minor Revisions Required

We hope you will look favourably on the revised manuscript having taken the reviewers comments into consideration.

VERSION 2 – REVIEW

REVIEWER	Kyla Terhune Vanderbilt University Medical Center, Nashville, Tennessee, United States of America Please note that I also had a trainee participate in this review: Andrew Medvecz, MD
REVIEW RETURNED	07-Sep-2017

GENERAL COMMENTS	Citing a decline in the number of applications for surgical trainee positions, the authors conducted a survey of surgical trainees throughout the United Kingdom and Ireland to assess costs that they are expected to pay for postgraduate training. As a trainee and surgeon in the United States, where the medial medical student debt in 2015 was reported to be $180,000 (USD), we found this to be an interesting review and comparison of the two systems and expenses incurred by trainees.

	Our own experience, compared to review of this manuscript, suggests that, although the debt at the conclusion of medical school in the United States is much greater, costs related to surgical training by residents (or consultants-to-be) in the United States are much less compared to the UK, as reported in this manuscript. The authors distributed the survey to multiple mailing lists for surgical trainee and specialty associations. The results suggest that there are expenses that are mandatory for completion of surgical training that are not subsidized by Local Education Training Boards or Health Service Executive and are the responsibility of the surgical trainee. The authors use a combination of survey data and as well as other resources to calculate the costs of course and conference costs and argue that these costs should potentially be covered by Local Education and Training Boards. Below we list the comments from our initial review with comments from the manuscript revision listed in italics. These are minor suggestions rather than comments requiring major revisions. The authors adequately addressed almost all points, to this reviewer's satisfaction. Comments • The response rate is able to be calculated from the total number of potential trainees that the authors list (page 8, line 39), but the authors should provide a response rate in both the abstract and the results. Also, it appears that there were 1603 surveys submitted by only 848 completed. Was there a range of completion that was required? Elimination of almost half of those submitted is concerning. On Revision: The authors took corrective action by addressing the potential bias of excluding incomplete surveys. The authors have not included the response rate in the abstract, and we continue to recommend that it be listed there as well. • The survey is not included in the document, so we did not have the opportunity to review this. It would be beneficial to include the survey as a figure and supplement so that readers can know the questions that were asked. On Revision: The authors took corrective action by including the survey as Appendix 2 although it requires labeling. • The strengths and limitations of the study are listed together on page 4. As a minor suggestion, it would be easier to read if it were stratified by strengths, followed by weaknesses. On Revision: We continue to recommend that the authors stratify the strengths and weaknesses, but this is a minor point. • The description of participants and setting in the methods section requires significant revision. Although this may be helpful for the international reader, depending on the audience, there may be significant extra information that is not relevant to the goal of establishing the costs that surgical trainees are paying. No explanation was provided to describe why these recommendations were not felt to be pertinent. On Revision: This takes up a significant amount of unnecessary description in the "Participants and Setting" portion of the Methods. In fact, only the last sentence of the section describes the participants. The description of the Joint Committee on Surgical Training and Local Education Training Boards in this section is not appropriate for this section. The costs associated with these can be accounted for in the later tables describing mandatory costs. • It would be helpful if the authors were to provide more granular information as to what costs are mandatory and what costs are optional (page 14 line 33).

	This could be done in tabular format. For the costs incurred which are optional, does this suggest a difference in training experience that trainees feel much be supplemented? Rather than a mean, it would be helpful to know how many incur minimal costs and how many incur maximal (e.g. multiple optional courses). On Revision: The authors provide several tables in Appendix 4 regarding the mandatory costs for each training program. Optional costs are not listed in table format but are listed in the results section. The authors did include several statements regarding the reason that additional training costs are incurred. • The authors discuss variations in study budgets based on regional variations which are not pertinent to the initial study aim to determine the costs incurred by surgical trainees. This section could be eliminated from the discussion with focus remaining on the financial burden of training to become a surgeon. On Revision: We continue to feel that this is not an integral part of the study, as it is not addressed in the aim or abstract. The identified difference in study budgets may be included as a separate study focused on policy, but the point of this paper is to identify the overall financial impact that training to be a surgeon has on an individual, not apparent inequality among support. Remove page 16 lines 3-27. • On page 16 line 11, the authors state that doctors must be more aware of the potential costs that they will incur during their training. Does the JCST not provide estimates of these costs based on the guidance described on page 10 lines 31 and 35? Why is there a discrepancy? On Revision: The authors have identified that there was no previous data regarding the potential costs that trainees will incur during training. • It would be a helpful international reference for the authors to also list a range of expected salaries once trainees have reached consultant status. On Revision: The authors have addressed this point. • It was a surprise that 47% of trainees reported obtaining an additional postgraduate degree. For future studies, it would be interesting to know why these were pursued and if these contributed to additional subsequent earnings or if they were pursued because of a concern that a medical degree and surgical training was not enough. On Revision: The authors included reasons for why physicians are pursuing additional degrees. • CCT is first defined on page 12 but utilized much earlier. Please define earlier for international readers. On Revision: The authors listed the definition of CCT earlier in manuscript. Additional Minor points that the authors may want to address: • Are the authors able to account for inflation when making their comparison to the costs in the early-2000s? Have starting salaries also changed, but the increasing debt and cost amounts are outpacing them? • Page 10 line 49 should read: “Using guidance available from the JCST, the total cost of achieving the mandatory and desirable requirements in each of the surgical specialties was also calculated.” • Page 12 line 20 starting “For the purposes…” should be moved to the “Data analysis” section, as only results should be listed in the “Results” section. • Remove page 15 line 28-32, as there is no justification for this line offered elsewhere in this paragraph. The “equitable distribution” phrase implies some inequality that we cannot identify.

	• Page 16 line 56, there is an inappropriately placed closed parentheses after “members” • Page 17 line 5, there is an inappropriately placed closed parentheses after “years”

VERSION 2 – AUTHOR RESPONSE

1. The response rate is able to be calculated from the total number of potential trainees that the authors list (page 8, line 39), but the authors should provide a response rate in both the abstract and the results. Also, it appears that there were 1603 surveys submitted by only 848 completed. Was there a range of completion that was required? Elimination of almost half of those submitted is concerning.

Response: On Revision: The authors took corrective action by addressing the potential bias of excluding incomplete surveys. The authors have not included the response rate in the abstract, and we continue to recommend that it be listed there as well.

We have not added wording related to the response rate to the abstract as the current word count is 297 and the word limit is 300. We do not feel we are able to delete any wording out of the abstract, without losing important information.

2. The strengths and limitations of the study are listed together on page 4. As a minor suggestion, it would be easier to read if it were stratified by strengths, followed by weaknesses.

Resoponse: On Revision: We continue to recommend that the authors stratify the strengths and weaknesses, but this is a minor point.

This has already been altered on the previous submission.

3. The description of participants and setting in the methods section requires significant revision. Although this may be helpful for the international reader, depending on the audience, there may be significant extra information that is not relevant to the goal of establishing the costs that surgical trainees are paying. No explanation was provided to describe why these recommendations were not felt to be pertinent.

Response: On Revision: This takes up a significant amount of unnecessary description in the “Participants and Setting” portion of the Methods. In fact, only the last sentence of the section describes the participants. The description of the Joint Committee on Surgical Training and Local Education Training Boards in this section is not appropriate for this section. The costs associated with these can be accounted for in the later tables describing mandatory costs.

We remain clear on the belief that the detail in the participant and setting section is important to give information to the international reader on how surgical training in the UK and Ireland compares to other countries. We do not feel there is ‘extra information’ that could be suitably removed.

4. The authors discuss variations in study budgets based on regional variations which are not pertinent to the initial study aim to determine the costs incurred by surgical trainees. This section could be eliminated from the discussion with focus remaining on the financial burden of training to become a surgeon.

Response: On Revision: We continue to feel that this is not an integral part of the study, as it is not addressed in the aim or abstract. The identified difference in study budgets may be included as a separate study focused on policy, but the point of this paper is to identify the overall financial impact that training to be a surgeon has on an individual, not apparent inequality among support. Remove page 16 lines 3-27.

We remain clear that the issue of study budget variation should remain in the paper. We disagree with the reviewer that the identified difference in study budgets may be included as a separate study focused on policy. The variation in study budget is directly related to the overall financial impact that training to be a surgeon has on an individual.

5. Are the authors able to account for inflation when making their comparison to the costs in the early-2000s? Have starting salaries also changed, but the increasing debt and cost amounts are outpacing them?

Response: No, as discussed in the previous submission with revisions, the figures in the manuscript have not been adjusted for inflation. We would be unable to accurately do so.

6. Page 10 line 49 should read: “Using guidance available from the JCST, the total cost of achieving the mandatory and desirable requirements in each of the surgical specialties was also calculated.”

Response: This has been corrected

7. Page 12 line 20 starting “For the purposes…” should be moved to the “Data analysis” section, as only results should be listed in the “Results” section.

Response: ‘For the purposes of monetary analysis UK military doctors (n=20) were excluded from the main analysis, however a summary of military doctors’ survey findings can be found in Appendix 3.’ This sentence describes the results of the military doctors linked by appendix 3, and we have therefore kept in the results section.

8. Remove page 15 line 28-32, as there is no justification for this line offered elsewhere in this paragraph. The “equitable distribution” phrase implies some inequality that we cannot identify.

Response: Please see section related to the inequality of study leave budgets.

9. Page 16 line 56, there is an inappropriately placed closed parentheses after “members”

Response: This has been corrected

10. Page 17 line 5, there is an inappropriately placed closed parentheses after “years”

Response: The closed parentheses is appropriately placed. Please see the sentence ‘These are a significant additional cost- for example, the 2016/2017 subscription rate is £315 (€370) for fellows and £226 (€265) for members, and the annual Irish Medical Council(IMC) retention fee (£477 (€560) for those registered for less than 3 years and £515 (€605) for those registered for more than 3 years).’