PEER REVIEW HISTORY

ARTICLE DETAILS

TITLE (PROVISIONAL)	Effectiveness of Preoperative Medical Consultations by Internal Medicine Physicians: A Systematic Review
AUTHORS	Pham, Clarabelle; Gibb, Catherine; Fitridge, Robert; Karnon, Jon

VERSION 1 – REVIEW

REVIEWER	Michael Swart Department of Anaesthesia and Perioperative Medicine Torbay Hospital Torquay Devon UK I have a profesional interst in perioperative medicine and shared decision making with high risk surgical patients.
REVIEW RETURNED	27-Sep-2016

GENERAL COMMENTS	Introduction clear, well written and addresses the key issues. Methods are easy to follow and appropriate. I understand you are focusing on internal medicine. Results are presented in a style that can be followed and understood. Discussion addresses the key problems of lack of RCT studies and possibility that RCT's may not be the appropriate way to evaluate a complex patient pathway. Internationally the role of internal medicine may and perioperative medicine may vary. In some centres the internal medicine role with surgical patients is carried out by a geriatrician or an anaesthetist. The literature is sparse and the search terms not clearly defined in terms of key search words. You may missed some publications in the geriatric medicine literature or that may have been intentional to focus on internal medicine. With an aging population, increasing comorbidities and increase in surgical procedures this is an important area for more research. This paper may stimulate further research.

REVIEWER	Stephan Thilen University of Washington, USA
REVIEW RETURNED	30-Sep-2016

GENERAL COMMENTS	The inclusion of the study by Auerbach et al in this Systematic Review of Pre-operative medical consultations is very questionable. The majority of consultations studied in the Auerbach et al paper were provided post-operatively (see table 2 in that paper). Therefore, the study does not seem to meet the inclusion criteria. An alternative to excluding this study may be to contact the authors and ask if a subgroup analysis is available for the patients who had preoperative medical consultations.

REVIEWER	Duminda N. Wijeysundera University of Toronto, Canada
REVIEW RETURNED	05-Oct-2016

GENERAL COMMENTS	Pham and colleagues present a well-written qualitative systematic review evaluating the effects of preoperative internal medical consultation on postoperative outcomes. This is an important area of perioperative practice that, at present, lacks a previously published systematic review. Thus, the potential value of this present manuscript to the literature is clear. That being said, I have several comments and suggestions for the authors' consideration. (1) The current literature search may have missed at least three non-randomized studies that are potentially relevant to the objectives of this systematic review. The potentially relevant studies include: i. Vazirani and colleagues: Perioperative processes and outcomes after implementation of a hospitalist-run preoperative clinic. (PMID 22961756) ii. Ohrlander and colleagues: Influence of preoperative medical assessment prior to elective endovascular aneurysm repair for abdominal aortic aneurysm. (PMID 22801403) iii. Faggiano and colleagues: Preoperative cardiac evaluation and perioperative cardiac therapy in patients undergoing open surgery for abdominal aortic aneurysms: Effects on cardiovascular outcome. (PMID 22304861) If these studies had been intentionally excluded, what was the rationale for the decision? Conversely, if the studies had not been identified in the electronic database search, the authors should expand their search criteria further to ensure that all relevant papers are identified. (2) The manuscript should explicitly state how many individuals were involved in the literature search process. For example, was the search performed by reviewers working in pairs? (3) In the study by Auerbach and colleagues, the focus was on

	perioperative consultations, which were defined as consultations occurring within 1 day before or after surgery. Thus, an important limitation that should be mentioned with respect to this study is that concerns about impending complications may have led to consultations being requested – thus leading to considerable confounding by indication. Indeed, Auerbach and colleagues themselves state: “Alternatively, consultation may have been prompted because the surgical team had concerns about a complication (or recognized one had taken place) or because they suspected a complication and were asking a consultant to aid diagnosis. These effects would have made it difficult to detect whether consultation actually reduced the risk for complications.” (4) Additionally, the control or comparison group in the study by Auerbach and colleagues would have included individuals who might have undergone a medical consultation within 2 or more days before surgery. This aspect is not made sufficiently clear in either the text or in Figure 2. (5) On page 17 (paragraph 2), the basis for Wijeysundera and colleagues stating that internists “actively guided care” is that consultation was associated with increases in related processes of care, such as specialized cardiac testing and beta-blockade (thus suggesting that internists were actively making changes in preoperative management). (6) The authors should better discuss other potential reasons for the absence of a major beneficial effects on outcomes in the studies identified in this systematic review, aside from the underlying methodological issues with each study’s design. Other issues that merit mention include: i. There are few, if any, perioperative interventions proven to reduce perioperative risk. Thus, aside from optimizing patients before surgery, or cancelling excessively high-risk procedures, internists have few proven avenues for improving outcomes based on preoperative care. ii. there is evidence that surgeons may not refer the highest risk patients to internists appropriately, thereby leading to a misalignment between which patients get referred, and which patients receive consultation. Suggest reviewing PMID 22185874 and PMID 23503373 for previous data pointing to this issue. iii. Most of the studies included in this review did not measure subsequent postoperative follow-up by the consulting internist, which may be critical for ensuring that complications are prevented and treated early after surgery. (7) While RCTs are less prone to bias than non-randomized studies – as discussed on page 18 (paragraph 2), there are important practical issues with implementing a RCT of preoperative medical consultation. Specifically, it may be very challenging to convince patients and doctors to randomize identified high-risk patients to the no-consultation arm. Thus, an individually randomized trial, while ideal from a methodological perspective, may simply not be feasible.

VERSION 1 – AUTHOR RESPONSE

Reviewer: 1
Reviewer Name: Michael Swart
Institution and Country: Department of Anaesthesia and Perioperative Medicine, Torbay Hospital, Torquay, Devon, UK
Competing Interests: I have a professional interest in perioperative medicine and shared decision making with high risk surgical patients.

Comment: Introduction clear, well written and addresses the key issues.
Methods are easy to follow and appropriate. I understand you are focusing on internal medicine.
Results are presented in a style that can be followed and understood.
Discussion addresses the key problems of lack of RCT studies and possibility that RCT's may not be the appropriate way to evaluate a complex patient pathway.
Internationally the role of internal medicine may and perioperative medicine may vary. In some centres the internal medicine role with surgical patients is carried out by a geriatrician or an anaesthetist. The literature is sparse and the search terms not clearly defined in terms of key search words. You may missed some publications in the geriatric medicine literature or that may have been intentional to focus on internal medicine.
With an aging population, increasing comorbidities and increase in surgical procedures this is an important area for more research. This paper may stimulate further research.

Response: The authors thank Dr Swart for his comments.
The focus of our review was on internal medicine, specifically on preoperative medical assessment and management of patients who have been scheduled for surgery. Such assessments performed by geriatricians in surgical patients would not have been excluded in our searches but there were no studies identified with this specific focus.

Reviewer: 2
Reviewer Name: Stephan Thilen
Institution and Country: University of Washington, USA
Competing Interests: None declared

Comment: The inclusion of the study by Auerbach et al in this Systematic Review of Pre-operative medical consultations is very questionable. The majority of consultations studied in the Auerbach et al paper were provided post-operatively (see table 2 in that paper). Therefore, the study does not seem to meet the inclusion criteria. An alternative to excluding this study may be to contact the authors and ask if a subgroup analysis is available for the patients who had preoperative medical consultations.

Response: We thank Dr Thilen for his comments.
The study by Auerbach and colleagues compared patients who received a medical consultation on the day before, day of, or day after surgery (intervention group) with those who may have received a consultation from an internist (medical consult) or another specialty on days other than the intervention, i.e. in two or more days before surgery (control group). The intervention group includes a proportion of patients undergoing a preoperative medical consultation by an internal medicine physician for elective surgery and so we believe it meets the specified inclusion criteria. The inclusion of this paper illustrates the heterogeneity of the delivery of preoperative medical consultations by internal medicine physicians in clinical practice. Responses to comments by Reviewer #3 (A/Prof Wijeysundera) further clarify the context of the study by Auerbach and colleagues.

Reviewer: 3
Reviewer Name: Duminda N. Wijeysundera

Institution and Country: University of Toronto, Canada
Competing Interests: None declared.

Pham and colleagues present a well-written qualitative systematic review evaluating the effects of preoperative internal medical consultation on postoperative outcomes.
This is an important area of perioperative practice that, at present, lacks a previously published systematic review. Thus, the potential value of this present manuscript to the literature is clear.
That being said, I have several comments and suggestions for the authors' consideration.

Comment (1) The current literature search may have missed at least three non-randomized studies that are potentially relevant to the objectives of this systematic review. The potentially relevant studies include:
i. Vazirani and colleagues: Perioperative processes and outcomes after implementation of a hospitalist-run preoperative clinic. (PMID 22961756)
ii. Ohrlander and colleagues: Influence of preoperative medical assessment prior to elective endovascular aneurysm repair for abdominal aortic aneurysm. (PMID 22801403)
iii. Faggiano and colleagues: Preoperative cardiac evaluation and perioperative cardiac therapy in patients undergoing open surgery for abdominal aortic aneurysms: Effects on cardiovascular outcome. (PMID 22304861)
If these studies had been intentionally excluded, what was the rationale for the decision? Conversely, if the studies had not been identified in the electronic database search, the authors should expand their search criteria further to ensure that all relevant papers are identified.

Response: We thank A/Prof Wijeysundera for his comments and for bringing these studies to our attention.
The paper by Faggiano and colleagues (PMID 22304861) was identified in the initial search and screened for eligibility. It was excluded after full text retrieval as the intervention was an intensive cardiac preoperative evaluation performed by a cardiologist. The paper by Ohrlander and colleagues (PMID 22801403) was also excluded after full text retrieval as the preoperative evaluation was performed by a vascular specialist and not a general physician.
The paper by Vazirani and colleagues (PMID 22961756) has now been included and our review updated. Given the differing terms used for a specialist delivering this type of care across countries (physician, generalist, hospitalist, internist), we instead used terms describing the characteristics of the consult in our original search strategy. However, this study by Vazirani and colleagues was only identified with the use of the specialist-specific term of 'hospitalist'. Thus, the search strategy has been re-run to include search terms that identified this study to check if there were other additional studies that were originally missed.

Comment (2) The manuscript should explicitly state how many individuals were involved in the literature search process. For example, was the search performed by reviewers working in pairs?

Response: The methods have been revised to the following:
"Two reviewers (CP, JK) independently screened all titles and abstracts to determine eligibility. Full texts were retrieved for potentially relevant articles. Disagreements were resolved through discussion."

Comment (3) In the study by Auerbach and colleagues, the focus was on perioperative consultations, which were defined as consultations occurring within 1 day before or after surgery. Thus, an important

limitation that should be mentioned with respect to this study is that concerns about impending complications may have led to consultations being requested – thus leading to considerable confounding by indication. Indeed, Auerbach and colleagues themselves state: “Alternatively, consultation may have been prompted because the surgical team had concerns about a complication (or recognized one had taken place) or because they suspected a complication and were asking a consultant to aid diagnosis. These effects would have made it difficult to detect whether consultation actually reduced the risk for complications.”

Response: We have extended our discussion on confounding by indication to include this limitation to the Auerbach study.

Comment (4) Additionally, the control or comparison group in the study by Auerbach and colleagues would have included individuals who might have undergone a medical consultation within 2 or more days before surgery. This aspect is not made sufficiently clear in either the text or in Figure 2.

Response: In the study by Auerbach and colleagues, patients in the control group may have received a consultation from an internist (medical consult) or another specialty on days other than the intervention, i.e. in two or more days before surgery. The text and Figure 2 have been revised for clarity.

Comment (5) On page 17 (paragraph 2), the basis for Wijeysundera and colleagues stating that internists “actively guided care” is that consultation was associated with increases in related processes of care, such as specialized cardiac testing and beta-blockade (thus suggesting that internists were actively making changes in preoperative management).

Response: Thank you for providing more information on this statement in your study. We have now included this additional information in the discussion section.

Comment (6) The authors should better discuss other potential reasons for the absence of a major beneficial effects on outcomes in the studies identified in this systematic review, aside from the underlying methodological issues with each study’s design. Other issues that merit mention include:
i. There are few, if any, perioperative interventions proven to reduce perioperative risk. Thus, aside from optimizing patients before surgery, or cancelling excessively high-risk procedures, internists have few proven avenues for improving outcomes based on preoperative care.
ii. There is evidence that surgeons may not refer the highest risk patients to internists appropriately, thereby leading to a misalignment between which patients get referred, and which patients receive consultation. Suggest reviewing PMID 22185874 and PMID 23503373 for previous data pointing to this issue.
iii. Most of the studies included in this review did not measure subsequent postoperative follow-up by the consulting internist, which may be critical for ensuring that complications are prevented and treated early after surgery.

Response: Thank you for bringing these additional issues to our attention. All three issues have now been included in our discussion and strengthen the need for further research in this important area.

Comment (7) While RCTs are less prone to bias than non-randomized studies – as discussed on page 18 (paragraph 2), there are important practical issues with implementing a RCT of preoperative medical consultation. Specifically, it may be very challenging to convince patients and doctors to randomize identified high-risk patients to the no-consultation arm. Thus, an individually randomized trial, while ideal from a methodological perspective, may simply not be feasible.

Response: Our discussion on the issues with conducting a RCT in this area has been expanded to include this feasibility issue.

VERSION 2 – REVIEW

REVIEWER	Michael Swart Department of Anaesthesia and Perioperative Medicine, Torbay Hospital, Torquay, Devon, UK I have a professional interest in perioperative medicine and shared decision making with high risk surgical patients.
REVIEW RETURNED	26-Jul-2017

GENERAL COMMENTS	Introduction clear, well written and addresses the key issues. Methods are easy to follow and appropriate. I understand you are focusing on internal medicine. Results are presented in a style that can be followed and understood. Discussion addresses the key problems of lack of RCT studies and possibility that RCT's may not be the appropriate way to evaluate a complex patient pathway. Internationally the role of internal medicine and perioperative medicine may vary. In some centres the internal medicine role with surgical patients is carried out by a geriatrician or an anaesthetist. The literature is sparse and the search terms are not clearly defined or developed in terms of key search words. Publications from the anaesthetic and geriatric medicine literature will not have been identified. These may be providing a similar preoperative intervention but because they do not call themselves internal medicine they will not be identified. With an aging population, increasing comorbidities and increase in surgical procedures this is an important area for more research. This paper may stimulate further research.

REVIEWER	Duminda Wijeysundera University of Toronto, Canada
REVIEW RETURNED	01-Aug-2017

GENERAL COMMENTS	Pham and colleagues present a revised version of their qualitative systematic review evaluating the association of preoperative medical consultation with outcomes (including costs) after surgery. The authors have thoughtfully addressed comments from all the reviewers. I have several other comments and suggestions for their consideration. (1) Some reorganization of their discussion will help better communicate the overall themes identified in their literature review. At present, it is not easy for readers to identify these themes. For example, the authors might consider the following sub-headings in the Discussion - design limitations in prior research - potential explanations for absence of major benefits in prior research - recommendations for improvements in clinical practice and research design

	Subheadings such as these will help readers better grasp the overall themes being communicated. (2) An important issue is that the authors' definition for the consulting internal medicine physician is somewhat arbitrary. I appreciate the authors' reasons for excluding some of my suggested titles in my initial comments. That being said, the definition of a preoperative medical consultation in the 2010 Wijeysundera paper included consultations performed by a general internist, cardiologist, endocrinologist, geriatrician, endocrinologist, or nephrologist. Thus, the exposure in this study did not strictly meet the authors' definition of 'internal medicine physician'. My own contention is that their considerable overlap in the expertise of general internists and subspecialists (such as cardiologists, vascular specialists, geriatricians). In many countries (certainly in Canada), all these specialists are involved in preoperative medical consultations. Thus, the separation of consultations by general internists from consultations by some specialists seems arbitrary. I would suggest that, while there would be additional work involved, a broader review of the association of preoperative medical consultations (including those by specialists) would be a much stronger addition to the literature. (3) A potential exception are geriatricians, whose capacity for comprehensive geriatric assessments may be considerably different for some surgical populations. The authors might therefore want to comment on how their findings compare to reviews pertaining to preoperative geriatric assessments (for example, pubmed ID 24303856). (4) In addition, the authors might want to comment on why the findings for internal medicine consultation differ from some non-randomized studies of preoperative anesthesiology consultations (for example, pubmed ID 19307523 and 27433746). (5) In the conclusion, how did the authors decide that the "available evidence indicates that the timing of the preoperative medical consultation, a collaborative approach to patient care, and the decision making processes for surgery are potentially important factors that should be considered when designing a preoperative medical consultation service"?

REVIEWER	Stephan Thilen, MD, MS University of Washington, Seattle, WA, USA
REVIEW RETURNED	06-Aug-2017

GENERAL COMMENTS	Although only a minority of consultations in the Auerbach et al paper were actually provided preoperatively, it is perhaps acceptable to include it given the qualitative nature of this systematic review. It is also clear that whether this study is included or not, it will not change the overall results which are well summarised and stated by the authors. An additional minor comment is that citation [3] is not an example of "cost-effective assessment of surgical patients". This paper fails to discuss billing and reimbursements for the preoperative assessments, although they are likely to be substantial, and there is not sufficient reporting of important patient outcomes to allow for a meaningful evaluation of cost-effectiveness.

	Overall, the manuscript is now improved, and the authors have adequately addressed the reviewers' comments and suggestions. The manuscript is a potentially important addition to the literature, mostly by drawing attention to the extraordinary limitations of current evidence in the area of preoperative medical consultations.

VERSION 2 – AUTHOR RESPONSE

Reviewer: 1

Reviewer Name: Michael Swart
Institution and Country: Department of Anaesthesia and Perioperative Medicine, Torbay Hospital, Torquay, Devon, UK Competing Interests: I have a professional interest in perioperative medicine and shared decision making with high risk surgical patients.

Comment: Introduction clear, well written and addresses the key issues.
Methods are easy to follow and appropriate. I understand you are focusing on internal medicine.
Results are presented in a style that can be followed and understood.
Discussion addresses the key problems of lack of RCT studies and possibility that RCT's may not be the appropriate way to evaluate a complex patient pathway.
Internationally the role of internal medicine and perioperative medicine may vary. In some centres the internal medicine role with surgical patients is carried out by a geriatrician or an anaesthetist. The literature is sparse and the search terms are not clearly defined or developed in terms of key search words. Publications from the anaesthetic and geriatric medicine literature will not have been identified. These may be providing a similar preoperative intervention but because they do not call themselves internal medicine they will not be identified.
With an aging population, increasing comorbidities and increase in surgical procedures this is an important area for more research. This paper may stimulate further research.

Response: We thank Dr Swart for his additional comments.

We recognise that preoperative assessments may be undertaken by geriatricians and anaesthetists, but we considered it inappropriate to combine studies of the effectiveness of preoperative assessment by such sub-specialists and general physicians.

Anaesthetists in particular have a different focus and expertise, which may be complemented by non-anaesthetist-led preoperative assessment.

Geriatric-based preoperative assessment also has a different focus to general physician-led preoperative assessment, but here the two services may be substitutes rather than complementary. Our manuscript complements a recent systematic review of preoperative comprehensive geriatric assessment (CGA) (Partridge et al. 2014*), which reported similar findings to our systematic review, suggesting a positive effect but lacking conclusive evidence.

*Partridge et al. Anaesthesia 2014; 69(suppl 1): 8-16.

Reviewer: 2

Reviewer Name: Duminda Wijeysundera
Institution and Country: University of Toronto, Canada Competing Interests: None declared.

Pham and colleagues present a revised version of their qualitative systematic review evaluating the association of preoperative medical consultation with outcomes (including costs) after surgery.

The authors have thoughtfully addressed comments from all the reviewers. I have several other comments and suggestions for their consideration.

Comment (1) Some reorganization of their discussion will help better communicate the overall themes identified in their literature review. At present, it is not easy for readers to identify these themes. For example, the authors might consider the following sub-headings in the Discussion
- design limitations in prior research
- potential explanations for absence of major benefits in prior research
- recommendations for improvements in clinical practice and research design

Subheadings such as these will help readers better grasp the overall themes being communicated.

Response: We thank A/Prof Wijeysundera for his additional comments.

Subheadings have been added to the discussion section for clarity.

Comment (2) An important issue is that the authors' definition for the consulting internal medicine physician is somewhat arbitrary. I appreciate the authors' reasons for excluding some of my suggested titles in my initial comments. That being said, the definition of a preoperative medical consultation in the 2010 Wijeysundera paper included consultations performed by a general internist, cardiologist, endocrinologist, geriatrician, endocrinologist, or nephrologist. Thus, the exposure in this study did not strictly meet the authors' definition of 'internal medicine physician'. My own contention is that their considerable overlap in the expertise of general internists and subspecialists (such as cardiologists, vascular specialists, geriatricians). In many countries (certainly in Canada), all these specialists are involved in preoperative medical consultations. Thus, the separation of consultations by general internists from consultations by some specialists seems arbitrary. I would suggest that, while there would be additional work involved, a broader review of the association of preoperative medical consultations (including those by specialists) would be a much stronger addition to the literature.

Response: A/Prof Wijeysundera is correct and has raised an important issue in the 2010 Wijeysundera paper, where the preoperative medical consultation could have been performed by a general internist or sub-specialist. Upon reflection, this study should be excluded as we are unable to determine which specialist performed the consultation and their potential effect on postoperative outcomes.

As noted in our response to reviewer 1, we recognise that preoperative assessments may be undertaken by many different clinicians, but we considered it inappropriate to combine studies of the effectiveness of preoperative assessment by sub-specialists and general physicians. For this reason, we have now limited our review to consultations by general internists as their role differs to that of sub-specialists, and a review including sub-specialists would be answering a different research question and thus beyond the scope of this review.

Our understanding is that general internists review multi-organ aspects of patient care as well as the functional importance of frailty, compared with sub-specialists who focus only on their specialty (single-organ, with the potential exception of geriatricians (see comment and response below)). In Australia, the general internist may consult with the single-organ sub-specialists and synthesizes the importance of each of the co-morbidities in order to provide the surgeon with an overall assessment about the patient.

The review has been revised to exclude the 2010 Wijeysundera paper.

Comment (3) A potential exception are geriatricians, whose capacity for comprehensive geriatric assessments may be considerably different for some surgical populations. The authors might therefore want to comment on how their findings compare to reviews pertaining to preoperative geriatric assessments (for example, pubmed ID 24303856).

Response: We agree that despite a great deal of overlap between geriatrics and general internal medicine, the aim or focus of a comprehensive geriatric assessment (CGA) may differ to preoperative medical assessment in some surgical populations. We thank A/Prof Wijeysundera for suggesting the review on CGA to highlight the importance of a CGA intervention to have both assessment and patient-specific optimization components. A CGA intervention that focuses on the assessment component only will differ to the focus of a general internist who will assess the patient and recommend specific management plans to optimise modifiable risk factors for adverse postoperative outcomes. We have included this in the discussion.

Comment (4) In addition, the authors might want to comment on why the findings for internal medicine consultation differ from some non-randomized studies of preoperative anesthesiology consultations (for example, pubmed ID 19307523 and 27433746).

Response: As mentioned previously, it is our understanding that the role of the general internist in assessing and optimising the patient's modifiable co-morbidities complements the skillset of the anaesthetist who provides safe anaesthesia and specific perioperative management. The differences in the expertise and foci between the sub-specialties may explain the differences in such findings.

Comment (5) In the conclusion, how did the authors decide that the "available evidence indicates that the timing of the preoperative medical consultation, a collaborative approach to patient care, and the decision making processes for surgery are potentially important factors that should be considered when designing a preoperative medical consultation service"?

Response: The conclusion has been reworded to provide clarity:
The available evidence suggests a positive effect of preoperative medical consultation with a general internist compared to standard care, but more conclusive evidence may be needed to persuade hospitals to fund such a service. Alternative forms of preoperative assessment may also need to be considered, such as geriatric assessment and there may be scope to optimise the value of such services by closer consideration of referral criteria and the timing of preoperative assessment.

Reviewer: 3

Reviewer Name: Stephan Thilen, MD, MS
Institution and Country: University of Washington, Seattle, WA, USA Competing Interests: None declared

Comment: Although only a minority of consultations in the Auerbach et al paper were actually provided preoperatively, it is perhaps acceptable to include it given the qualitative nature of this systematic review. It is also clear that whether this study is included or not, it will not change the overall results which are well summarised and stated by the authors.
An additional minor comment is that citation [3] is not an example of "cost-effective assessment of surgical patients". This paper fails to discuss billing and reimbursements for the preoperative assessments, although they are likely to be substantial, and there is not sufficient reporting of important patient outcomes to allow for a meaningful evaluation of cost-effectiveness.
Overall, the manuscript is now improved, and the authors have adequately addressed the reviewers' comments and suggestions. The manuscript is a potentially important addition to the literature, mostly by drawing attention to the extraordinary limitations of current evidence in the area of preoperative medical consultations.

Response: We thank Dr Thilen for his additional comments.

We agree that the study by Parker and colleagues was not a cost-effectiveness evaluation but in our introduction we have only mentioned that the IMPACT Center was established with the aim to provide thorough, timely, and cost-effective assessment of surgical patients. The IMPACT Center was mentioned as an example of a dedicated preoperative assessment clinic in the US.

VERSION 3 – REVIEW

REVIEWER	Duminda Wijeysundera University of Toronto, Canada
REVIEW RETURNED	04-Oct-2017

GENERAL COMMENTS	The authors have addressed all my comments thoughtfully. I congratulate them on a well-written manuscript.