Author’s response to reviews

Title: Barriers and facilitators of pediatric shared decision making: a systematic review

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Author’s response to reviews:

Response to reviewers (IMPS-D-18-00510)

Dear reviewers,

Thank you for the opportunity to respond to your comments and strengthen our manuscript. Below you will find an itemized response to each comment. Given that there were numerous comments, we have merged similar comments to reduce the redundancy of our responses.

1) Thank you for the opportunity to review "Barriers and facilitators of pediatric shared decision making: a systematic review." This study described in the manuscript reports the results of a systematic review of determinants of the implementation of shared decision-making in pediatric settings. The clinical topic, although outside my area of expertise, seems important, particularly
in the context of concerns about the agency of children who must rely on parents and guardians for their decision-making, in addition to adults' reliance on providers for direction. Overall, the study seems to have been conducted rigorously; however, I have several concerns that, if addressed, would strengthen the paper.

Thank you for this positive feedback. We have worked to address the comments below to strengthen our paper.

2) Thanks for the opportunity to review this piece of research. This appears to be a rigorous and relevant piece of research that I'm happy to recommend for publication after having been subject to minor revisions.

Thank you for this positive feedback. We hope that our revisions have met your expectations.

3) The authors have presented a very thorough and methodologically sound systematic review about factors influencing the shared decision-making process in pediatric clinical practice. I have made some minor suggestions that will hopefully add some further clarity to the paper.

Thank you for this positive feedback and for your suggestions to improve clarity of the paper.

4) Abstract: Add more about the importance of SDM in peds like what you provide in last para on p4

Thank you for this suggestion. We added the following sentences to our abstract: “Shared decision-making (SDM) is rarely implemented in pediatric practice. Pediatric health decision making differs from that of adult practice.”

Abstract, Background, Page 2

5) Abstract: Some parts are difficult to understand. What does the following mean? "We considered all or no comparisons." Do you mean that you included studies with all types of
designs? Do you mean to refer to inclusion criteria with the following? "Included studies reported barriers and/or facilitators about SDM in a pediatric clinical context from the perspective of HCPs, parents, children, or observers."

Thank you for bringing this to our attention. We clarified this sentence as follows: “We considered all or no comparison groups and included all study designs reporting original data.”

Indeed, we did mean to refer to the inclusion criteria with the sentence you indicated. However, we have made this more explicit by rephrasing the sentence to read: “We included studies that reported clinical pediatric SDM barriers and/or facilitators from the perspective of HCPs, parents, children, or observers. We considered all or no comparison groups and included all study designs reporting original data.”

Abstract, Methods, Page 2

6) Intro - Add the rationale to objective statement at end, other than we lack knowledge - what can we do with potential findings?

Could you perhaps elaborate a bit more on what is known about the implementation of SDM in paediatric care (or in general)? For example, what kind of outcomes has it been associated with? You touch upon this in the discussion, but I think it would be helpful to get more background information earlier on. Further, it would be good if you could briefly address how your review adds to the Wyatt et al 2015 paper. In the first paragraph, you mentioned that implementation of SDM in pediatric healthcare remains limited. It would be helpful to explain in what sense its limited? as it would explain the problem clearly and the rationale for conducting this review.

We agree and added the following paragraph to our introduction: “Effective implementation of healthcare innovations requires knowledge about the barriers and facilitators influencing its use [7]. When implementation interventions are designed to overcome identified barriers, there is increase use of the innovation (e.g., SDM) in clinical practice [7] and barriers and facilitators to knowledge use are among the best predictors of intention and actual behavior change [12]. In the adult literature, high quality evidence underpins several implementation interventions, such as patient decision aids, decision coaching, and education and training, that facilitates the SDM process in clinical consultations [21, 48, 49]. Compared to the adult literature, few pediatric SDM implementation interventions have been developed, monitored or evaluated [50, 51]. A
systematic review that evaluated the efficacy of SDM interventions in pediatrics found that of the 54 unique SDM interventions identified, 63% targeted the parents. Only half of these interventions were evaluated. Meta-analysis suggested that SDM interventions might reduce parents’ decisional conflict and improve their knowledge, but the impact on other adopters (e.g., children) was inconclusive (Wyatt). Knowledge about the factors influencing SDM could inform and advance SDM implementation in pediatric practice.”

As implied in the previous paragraph, the Wyatt review evaluated the efficacy of SDM interventions (e.g., patient decision aids), whereas we determined what hinders or enables the use of SDM in clinical practice.

Methods, Data Analysis, Pages 9, 10

8) The OMRU is never clearly described, so I had to learn about it as I read through the authors' application of the model, and I was left wondering whether I really understood it. In particular, I'm interested in the definitions of the domains and constructs within the OMRU and how they were applied to the data extracted in this review. Here's just one example: P6 line 8 Vague: the decision level includes influencing factors related to the decision itself (e.g., features of the options or high or low stake decisions)" the example isn't helpful. Generalizing to other interventions, decision/problem to which the intervention is being applied to address. So does this boil down to perceived need? It seems like this should map onto OMRU; it's not clear why it's an emergent code. Similarly, P6 line 18: relational represents the interpersonal process between the HCP, patient, and family [16]: is there not an OMRU construct that relates to social interactions? This is surprising.

P 5-6, lines 58-6: Did you add the two additional levels (decision and relational) before or during the synthesis process?

During my initial reading, I assumed the latter, but on p 8 when you mention "Second, two coders deductively analyzed the content using the OMRU barrier and facilitator levels (decision, innovation, adopter, relational, and environment) and a SDM barrier and facilitator taxonomy [8, 18]", it seems to suggest that it was decided prior to the coding. Could you perhaps elaborate a bit more on how you came up with the two added levels (decision and relational) and how they fit into and/or change the original OMRU framework? Explain what the Ottawa Model of Research Use is and how it relevant to your study - it's an implementation determinants framework.
Thank you for bringing this to our attention. To address this issue, we added a section entitled, “Conceptual Model”, under which we included a fuller description of the OMRU. Included is a figure of the OMRU, with permission of the author (IDG; a co-author on this manuscript).

We have also clarified the role of the OMRU in our analysis. Although the OMRU guided the barrier and facilitators assessment approach and informed data extraction, it was used to categorize the findings that were deductively coded using SDM taxonomies (as well inductive codes). Therefore, going from more specific (SDM specific) to broader (OMRU).

A complete description of the OMRU and the definition of its domains and constructs is beyond the scope of this paper. However, we reference the most up-to-date chapter for readers. However, we have added to our decision level definition to read as follows:

“The decision level includes influencing factors related to the decision itself or that are antecedent to the SDM process (e.g., features of the options and high or low stake decisions)”

Indeed, the OMRU references social interactions under the environment. However, typically the OMRU guides barrier and facilitator assessments one adopter type (e.g., colleagues that say hand washing protocols are overrated would be a social barrier in the environment for the implementation of hand washing best practices). For SDM there are relational influences that occur between multiple adopters (e.g., HCPs, parents and children) for whom SDM targets. Therefore, it is not logical that these interactions are categorized under the environment for this innovation. As such, we added the Relational level.

Methods, Conceptual Model, Page 6, Figure 1

9) The application of the OMRU to organize the results section, in particular, seems to have actually complicated things rather than organized the results. I didn't understand which of the results were the authors' findings and which were OMRU constructs. More on this when I critique the results section below

In addition to providing a rationale for conducting a barrier and facilitator assessment, the OMRU provides a theory-driven and evidence-informed structure for which to systematically categorized our barriers and facilitators. As such, we maintain that it is important to apply
throughout our study, including the categorization of the results. However, we have made several edits to improve clarity (please see response to reviewers Items 7 and 8).

10) It's not clear to me why you break determinants into barriers and facilitators. Surely there were some studies that just described 'determinants,' not pinning negative (barrier) or positive (facilitator) labels to them. How were these handled?

The SDM literature has traditionally divided determinants, or factors influencing Pediatric SDM, into barriers or facilitators depending on how the adopter (or person reporting the determinant) frames the influencing factor (e.g., systematic reviews from Legare, 2008 and Joseph-Williams, 2014). Identifying barriers and facilitators approach allows comparison with the existing literature and will help readers to know what hinders or enables SDM use in pediatric clinical practice. This approach is also consistent with implementation science theoretical frameworks. According the Ottawa Model of Research Use (and other widely used implementation frameworks, such as the Knowledge to Action Cycle), interventions can be designed to minimize barriers and leverage facilitators, when they are categorized as such. This approach is also supported by Cochrane and systematic reviews (e.g., Baker, 2010; Godin, 2008). Given the nature of our data, influencing factors in the primary studies were framed negatively (barrier, “we don’t have enough time to use SDM) or positively (facilitator, “having access to patient decision aids helps me use SDM) in the primary studies.

However, if a reader wishes to only examine the influencing factors (not divided into barriers and facilitators), we have also provided this for them in Figure 3.

We have also relabelled a section in the results to read, “Factors Influencing Pediatric SDM and the OMRU”

11) The OMRU seems like it complicated rather than facilitated the reporting of results. I don't come away with a clear sense of what influences SDM implementation in pediatric settings. I'd like to see results presented instead perhaps in terms of frequency - which were the most frequently reported?
Results in general are confusing. In particular, that they're organized by OMRU is really confusing. Without the constructs in parentheses, reading this would probably more straightforward.

Please refer to our responses to items #7 and 8, for changes to improve the clarity around our use of the OMRU. Given that we employed a qualitative approach to analysing our data, we decided to include frequency counts, but not overly emphasize them. Our analysis cannot determine which barriers and facilitators are most important (even if frequent), nor can we determine their weighted value from the primary studies. We have eliminated our frequency counts in the text based on another reviewer’s suggestion (see item #38). However, Table 4 lists and rank orders the frequency that barriers and facilitators were cited under each OMRU level and for each participant type.

12) I'm not sure how table 5 represents a taxonomy. Shouldn't that be the OMRU?

We thank you for your comment, but are unsure whether we fully understand its implications. Table 5 (now table 4) provides a comprehensive categorization of the determinants (including barriers and facilitators) of pediatric SDM across the OMRU levels and for each participant type. We also include the frequency that determinant, barrier, and facilitator are cited. The OMRU provides a structure for which to present these factors. As such, the taxonomy is presented using the categories in the OMRU framework.

Table 4

13) I was surprised to see that environment includes legislation, policy and uncontrolled events. Aren't these things that contribute to the environment, not the environment itself?

We agree with your assessment, that these are factors that contribute to the environment. This is consistent with the planned action theories that underpin the OMRU. We have clarified our definition as follows: “The practice environment, in this case defined as the pediatric clinical setting, includes structural factors such as legislation, policy, physical structures, and workload.”
As such, factors such as policy and legislation are environmental factors that exert influence on adopters, which potentially affects their behaviour (e.g., for SDM).

Methods, Conceptual Model, Page 6

14) The synthesis of results section shouldn't be necessary - the results should be presented already synthesized; as currently written, there's not enough synthesis of what's in table 5; section 1.3.3 is extremely hard to follow, rendering it pretty unhelpful. What's currently in the synthesis of results section isn't helpful without prose walking us through it.

I don't understand figure 3 at all. Either explain more in the text or eliminate. I don't see what it adds.

We have relabelled this section, “Factors Influencing Pediatric SDM and the OMRU” and have re-written it.

We included figure 3 to provide a visual summary of the findings as determinants (termed influencing factors) of pediatric SDM.

This figure allows readers to at a glance see determinants at different OMRU levels and identify where they fit in the implementation process.

We have re-written the text, under the new subheading “Factors Influencing Pediatric SDM”

Results, Factors Influencing Pediatric SDM, Page 16

15) P 15, section 1.3.3: what is meant by "value-neutral barriers and facilitators"?

We have clarified the sentence to read: “To demonstrate how barriers and facilitators can inform the implementation process, we mapped pediatric SDM influential factors (i.e., not separated into barriers and facilitators), to the OMRU (Figure 4)”
16) What were the search terms? That you ended up with 20k+ records and ended up with only 80 included studies suggests that your search wasn't specific. This should be addressed. That seems like a low hit rate, so it makes me think that there was a problem with the search. Hard to tell because no search terms. Please see supplementary file 1 for an example of the search terms for the CINAHL database. Our interpretation of the search strategy is that it was broad and sensitive. Shared decision making is not a clearly defined topic, particularly in pediatrics. Therefore, a broader search strategy was necessary. After reviewing abstracts of relevant articles on the topic, it was clear that widely used terms such as “informed decision” or “informed choice” needed to be included in the search thus increasing the retrieval. In other words, part of the challenge is that the databases are not coded to consistently. We did not want to chance missing relevant articles and so included the relevant phrases. Although this approach increased the irrelevant retrieval, it provided a greater likelihood that our search was comprehensive. In addition, the research question included the perspective of healthcare providers, parents, children and observers, which had to be reflected in the strategy. These multiple perspectives expanded the strategy and thus the results.”

17) Supplementary file 1: Is it correct that this search only applies to the CINAHL database? If so, could you please rephrase the reference to the appendix, so it's clear that it's a sample of the full search?

Yes, these search terms apply to the CINAHL database. We have clarified by making this explicit as follows: “The search was designed to target SDM barriers and facilitators in pediatric clinical practice (see Supplemental file 1 for an example from the CINAHL database).”

18) The description of the qualitative analysis is a bit vague. Was there a codebook that you could include, with decision rules and examples?

We are happy to share the codebook with individuals who contact the authors directly. If the editor thinks this should be included as a “for review” file, please let us know.
19) Methods: In the inclusion criteria section, you need to clarify further what you mean by observers, who are they? maybe provide some examples?

Thank you for this question, we have elaborated on our description of an observer by adding the following: “Observers are individuals who were not involved in pediatric SDM process, but evaluated SDM in some way (e.g., research assistants who evaluated SDM in person or in videotaped consultations using a validated instrument). Observers differ from adopters, in that adopters are involved in the SDM process.”

Methods, Inclusion Criteria, Page 7

20) Inclusion criteria: P6 line 51 - with or without comparisons. - do you mean comparison groups - as in single as well as multi-group designs?

Thank you for pointing this out. Yes, we meant to write comparison groups and have made the edits as you suggested, as follows: “We included all study designs with original data, with or without comparison groups.”

Abstract and Methods, Inclusion Criteria, Page 7

21) What about peer reviewed as an inclusion criterion? This seems important.

We did not explicitly list ‘peer-reviewed’ in our inclusion criteria. However, we only searched reputable databases known to index peer reviewed literature. Predatory and non-peer reviewed journals are rarely indexed in these databases. Additionally, we excluded publications that are more likely to not be peer-reviewed (e.g., commentaries, editorials, opinion pieces). Additionally, we think the risk of non-peer reviewed articles in our review is low given our search strategy did not examine the grey literature.
22) Saying that discrepancies were "Resolved through consensus" (p8 line 18) is vague. What was done in the case of discrepancies? How were they resolved?

Thank you for this request for clarification.

Consensus meetings were held between independent reviewers to compare data extraction and appraisal. Discrepancies were minor (e.g., one extractor missed an item) and easily resolved through discussion and article checking with the other independent reviewer. When independent reviewers could not resolve the discrepancy (i.e., 2 occurrences), the senior author (DS) arbitrated. This process is outlined by the Cochrane Handbook for Systematic Reviews, which we reference in our Design. Additionally, we added the phrase, “as outlined by the Cochrane Handbook for Systematic Reviews”.

Given the word limitation of the article, we have opted to use the reference rather than a description. However, if the reviewer and editor think this approach is insufficient, we are happy to include a fuller description of the process.

Methods, Data Collection, Page 9

23) Analysis description - describe content analysis before describing the tallying of counting barriers and facilitators.

Thank you for this suggestion, we have changed the order as recommended.

Methods, Analysis, Pages 9-10

24) Need more info about MMAT. What dimensions are included?

Thank you for this suggestion. We have added the following paragraph to describe the MMAT in greater detail: “Two independent raters appraised study quality using the Mixed Method Appraisal Tool (MMAT) [20, 21]. The MMAT criteria (Table 3) were developed based on a thematic analysis of the quality appraisal processes revealed by health-related systematic reviews
The tool was designed to concurrently appraise qualitative, quantitative, and mixed method studies for large and complex systematic reviews [21]. Its reliability is reported to range from fair to perfect [22]. The MMAT is well suited for the assessment of complex interventions that are context-dependent and process-oriented, such as SDM. Raters resolved discrepancies through discussion and consensus.”

Please note that each dimension is reported in Table 3 with quality appraisal results highlighted in section 1.3.2.

Methods, Quality Assessment, Page 10, Table 3

24) Last paragraph p9-beginning of p10 is curious. Do you mean to report on data sources from included studies?

Consider reporting with respect to self-report (interview, survey, etc.), observational (with a trained observer collecting structured data or perhaps secondary data from an EHR or similar) - see other systematic reviews for how this is described.

We reported the methodological approach used in the included studies. This categorization is consistent with the MMAT. To improve clarity, however, we moved these results to the Study Appraisal section.

Methods, Study Appraisal, pages 11-12

26) Why did you assess study quality if that did not influence how you subsequently synthesized the studies? For example, would your results remain the same if excluding studies of low quality from your synthesis? This is a voluntary suggestion, but past research have made efforts to investigate how study quality influence the themes identified by a thematic/narrative synthesis (see e.g. appendix C in Rees R, Oliver K, Woodman J, Thomas J (2009) Children's views about obesity, body size, shape and weight: a systematic review; or Bach-Mortensen et al 2018 https://doi.org/10.1186/s13012-018-0789-7)

Please also discuss how the quality and identified sources of bias of included studies might have influenced your findings.
Thank you for asking this question and providing a reference. Given the range study methodology included in our review, we appraised studies using the MMAT. The appraisal criteria are different for qualitative, quantitative and mixed method studies. We found that studies with different methodologies could not be accurately compared given that they had different questions, expectations of different rigour noted by the number of criteria needed to be deemed high quality (e.g., ranging from 4 (qualitative and quantitative studies) to 12 criteria (mixed method studies)). Thus, precluding accurate comparison even with percentages. Other than the mixed method studies (which had the most criteria to be evaluated against), few studies were of low quality, thus minimally impacting the overall results. Despite not having a sensitivity analysis of high quality studies, readers can get an appreciation of study quality, overall and at the individual study level.

We added the following to our limitation section: “Although we critically appraised included studies and reported potential sources of bias (overall and individually), we did not perform a sensitivity analysis. As such, it is possible that high biased evidence was given undue weight and low biased studies were under emphasized [Hannes]”

Discussion, limitations, page 21

27) Why did you include studies with multiple participants (Table 2: "Citations reporting perceptions for multiple participants"), although this, in case of parents and children, is contrary to your inclusion criteria: "We excluded studies that evaluated both children and adults" (p6, lines 51-53)

Thank you for noting this, we have clarified the latter to read: “Outcomes were barriers or facilitators of SDM in pediatric clinical practice reported in the results section of the included study. We excluded studies that reported on barriers and facilitators of health decisions for combined pediatric and adult patient populations (e.g., primary care settings).”

Methods, Inclusion Criteria, page 7

28) Who reviewed for inclusion? Please add the reviewers’ initials throughout.
We added the initials of those who reviewed for inclusion as follows: “This application allowed reviewers (LB, KL, JJ, DS, AS) to independently evaluate study eligibility in a three-stage screening process.”

Methods, Study Selection, Page 8

29) Methods - P5 line 34 redundant "We conducted a SYSTEMATIC REVIEW, guided by the Cochrane Handbook for Systematic Reviews [12], to SYSTEMATICALLY REVIEW"

Thank you for noting this, we removed the second reference to systematic reviews to avoid redundancy.

Methods, Page 6

30) I recommend referring to qual analysis of barriers and facilitators as template analysis since they used both deductive and inductive.

Thank you for your suggestion. After reading about template analysis, we agree that our process seems consistent with this approach. However, our approach is also consistent with content analysis, which can be used for both deductive and inductive analysis (Bengtsson, 2016). Additionally, we have concerns about retrospectively re-labelling our analysis and the implications for the construction of our codebook versus a template analysis.

31) P9 line 19: 'It's' should be 'its'

We agree and corrected it as suggested.
32) P 6, lines 53-58: the sentence should read: "These parameters are consistent with previous systematic reviews that examined SDM barriers and facilitators in adult clinical practice".

We agree and have edited the sentence as suggested.

Methods, Inclusion Criteria, Page 7

33) Did you identify additional studies by going through the references? If so, how many and were they included in the final synthesis?

To clarify, we added the following sentence to our methods: “Our review of reference lists of included studies did not identify additional studies.”

Methods, search strategy, Page 8

34) Results

line 30 After removing duplicates and screening citations, we examined 461 full texts. What does it mean to screen citations? Do you mean titles?

Thank you for highlighting this. We have clarified by replacing ‘citations’ with ‘titles and abstracts’.

Results, page 11
35) P9 line 31 "Of those, 80 publications, representing 79 distinct studies, were eligible for inclusion." Based on which review? Abstract? Full text?

We have clarified the sentence as follows: “After removing duplicates and screening titles and abstracts, we examined 461 full text articles, of which 79 publications (representing 78 distinct studies) were included.”

Methods, Identified Studies and Characteristics, page 11

36) P9 line 56: Barriers and facilitators were reported from the perspective of: HCPs (n=20), parents (n=18), children (n=8), multiple participant types (n=26), and observers (n=7). - this seems strange. Ns sum to 79, leaving 1 study missing and suggesting that no studies reported determinants from the perspective of more than one stakeholder. This seems unlikely.

Thank you for your attention to this detail. As you indicate, our total was 78, which represents the 78 distinct studies (1 study was reported in 2 publications, as indicated above and in the manuscript). 26 studies are reported from multiple perspectives. Perhaps the confusion stems from our use of language. We like your suggestion of “multiple perspectives” and have modified this accordingly throughout the manuscript.

Methods, Identified Studies and Characteristics, page 11

37) Results:

In Figure 2, it would look better if the x axis started from 1996.

We agree and have edited the figure as suggested.

Now Figure 3
38) Results:

Throughout the results, it might not be necessary to include the number of citations for each factor. The importance of the factor should not be viewed in relation to how many times it was mentioned, especially considering qualitative and mixed methods studies. Including these in the table might be sufficient.

Thank you for this comment, we agree and therefore have removed the number of citations for each factor and instead reserved this information for Table 4 (i.e., taxonomy).

Results section

39) Discussion section is too long, perhaps stemming from the confusing results section.

In particular, the use of OMRU actually even complicates discussion section, making it too abstract. The discussion section should be organized as follows:

summary of answers to study questions, comparison to relevant extant literature, limitations, recommendations for research practice policy, and conclusions.

Thank you for your suggestions for how to re-structure our discussion. Our first paragraph summarized the findings that are relevant to the research question. Comparisons to the literature are included throughout the discussion, limitations and conclusions are presented near the end of the discussion, and we have added implications for research and policy as suggested.

Discussion, reduced length throughout.

Implications and Suggestions for Future Work, pages 20, 21.

40) Given the agency issue related to children, the authors seem to have missed an opportunity to look at discrepancies in different stakeholders' perspectives on determinants of SDM.

I'd like to know if stakeholders reported determinants differently - are there systematic differences in the determinants that they report? This would be interesting and actionable. And were there differences across stakeholders?
Thank you for this interesting comment. Differences and similarities in adopters’ perceptions of barriers and facilitators of SDM in pediatrics are reported in our results, Table 4, and explored in our discussion.

41) The last sentence of the results section belongs in discussion section.

Thank you. As suggested, we removed this sentence from the results and added it to section 1.4.1 Discussion, Implications and Suggestions for Future Work, page 20

42) Several statements throughout discussion seem to reach beyond the results - e.g., "Children can be included and empowered by eliciting and incorporating their preferences and views in the decision making process." What finding is this based on?

This sentence draws from the broader literature. We have rephrased this statement and added a supporting reference as follows:

“Children can be empowered to participate to the extent they are able, through elicitation of their preferences and views, rather than confusing the child’s participation with autonomous decision making (Gabe).


We have added references to our discussion to support other statements or specifically indicated that the statement reflects our findings.
43) Strengths and limitations: Could you perhaps reflect on why you decided to include certain types of participants, but not others such as grandparents, step-parents, or siblings?

Given the size and complexity of the review, we opted to simplify by extracting data from those typically included in the SDM process (i.e., HCP, parent, child). Our definition of parents includes guardians, who could have been other types of legal caregivers. We have added detail as requested in Table 2.

44) Figure 3: Some of the arrows need graphic editing and there's a typo that should read 'uncomfortable decisions'.

Also, could you perhaps add some text in the manuscript on how the figure helps explain why the included elements are interrelated? For example, are some factors more influential than others?

We agree and corrected them as suggested. To help clarify, we have re-labeled and re-written and re-labelled this section “Conceptual Model”.

Based on our study, we are unable to comment on the nature of relationships and their strengths of association or how influential some factors are compared to others. We agree that this is an important area for future research, and thus have added this to our implication section in the conclusions, as follows: “Future research is needed to examine the nature and strengths of the relationships between influential factors to better understand the circumstances under which they interact within the healthcare system to impact SDM use in clinical practice.”

45) Was there any form of calculating reviewers' agreement?
Thank you for this question. As outlined by the Cochrane Handbook on Systematic Reviews we tracked reviewer agreement by logging 3 files for the extraction of each study: reviewer 1 data extraction, reviewer 2 data extraction, and a consensus file. In the consensus file, disagreements and consensus were colour coded. Quantification of agreement (e.g., kappa statistics) was not conducted.

46) Conclusions - what about for research? Policy?

Thank you for bringing this to our attention. We included the research and policy content under the section, “Implications and Suggestions for Future Work”. We also added this in the conclusion.

Discussion, Implications and Suggestions for Future Work, Conclusion, page 22

47) Limitations:

As the search results stopped at March 2017, consider adding an explanation of the possible impact of missing studies published between the last search and possible publication date. These studies’ findings might not differ from the included ones, but I think a discussion would be helpful.

Thank you for noting this. We have added the following to our limitation section: “Finally, our search was conducted in 2017. Given our review included 79 studies, it is less likely that newly published studies will have a significant impact on our findings.”

Discussion, Strengths and Limitations

48) Many of the included studies were conducted in the US, consider discussing how could this have impacted your results, in views of their healthcare system.
We agree that this is an interesting and important consideration. We added the following to our discussion for implications:

“Notably, most studies (44%) originated in the US, potentially reflecting barriers and facilitators that are unique to the US healthcare system. For example, features of the options and parental health insurance were more often cited by American studies. As such, not all influential factors are relevant or applicable to all contexts.”

Discussion, Limitations, page 21

49) P 19, lines 8-11: Here a Cochrane review is cited as reference number [36], which I was not able to identify in the reference list.


We have updated our references.

Pages 25-41

51) Tables 4 and 5 are difficult to understand and largely redundant. Text says that data are organized by OMRU domain, but I don't see any categories in the table. Why not just combine Tables 4 and 5? Table 5 has more information in it.

Thank you for this suggestion. We have now combined the tables, now called Table 4.
52) Table 2 - disaggregate method and data source; add study design (experiment, quasi-
experiment, observational); separate N and stakeholders (again, hard to believe each study only
collected data from one stakeholder type).

Thank you for your suggestion for Table 2. We have disaggregated as you suggest.

You are correct that several studies collected data from multiple stakeholder types. Please find
toward the end of our Table 2 that these studies are represented under: “Citations reporting
multiple perspectives”

Table 2

53) Table 2: More detail about the participants would be helpful. For example, would it be
possible to report on the age-group of children and perhaps distinguish between 'children' and
'adolescents', as well as 'nurses' and 'medical doctors', and 'single parents', 'couples' and 'step
parents'?

We agree and added this detail to Table 2. We also reported the ages of the children from whom
the data was collected.

Table 2

54) Table 3: Some text is missing in the 'mixed methods' row 1. Also, there's a typo at the
legend of the table: "unsur".

We have corrected Table 3 as you requested. The mixed methods row 1 now reads: “Is the
research design relevant to address the qualitative and quantitative research questions?”

Table 3
55) P 6, line 36: you mention 'PICOS', but in Table 1, only the population, intervention, comparison, and outcome components are included (thus leaving out the 'study method').

We agree and added Study Methods to Table 1 as suggested.

Table 1

56) PRISMA checklist: I suspect the attached version may apply to an earlier draft of the manuscript.

We have provided an updated PRISMA checklist for reviewers to match this submission.

PRISMA checklist, reviewer supplementary file.