

## Technical Brief Disposition of Comments Report

**Research Title:** Measuring Healthcare Organization Characteristics in Cancer Care Delivery Research

Draft report available for public comment from March 3, 2023, to April 2, 2023.

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## **Comments to Draft Report**

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Comments on draft reports and the authors' responses to the comments are posted for public viewing on the website approximately 3 months after the final report is published. Comments are not edited for spelling, grammar, or other content errors. Each comment is listed with the name and affiliation of the commentator if this information is provided. Commentators are not required to provide their names or affiliations in order to submit suggestions or comments.

This document includes the responses by the authors of the report to comments that were submitted for this draft report. The responses to comments in this disposition report are those of the authors, who are responsible for its contents, and do not necessarily represent the views of AHRQ.



## **Peer Reviewer Comments and Author Response**

|   | Commentator & Affiliation | Section              | Comment   | Response  |
|---|---------------------------|----------------------|---|---|
| 1 | Peer Reviewer #7          | Abstract             | Clearly written and provides an understandable overview of the work undertaken. Slightly more anchoring of the Integrated Framework and why other frameworks are compared against it (as the "gold standard"?) would be helpful. Under Findings, it might be helpful to include an example of what is meant by "improvement project implementation and barrier assessment," like a literal "(e.g., XXX)."   | The first point was also raised by other reviewers and is addressed under comment 13. Clarified that the Integrated Framework was created by NCI staff.  The second part of this comment was added: "(such as guideline implementation)." |
| 2 | Peer Reviewer #5          | Executive Summary    | On ES-3, line 41, there seems to be a typo.   | This line has been edited for clarity.  |
| 3 | Peer Reviewer #7          | Executive<br>Summary | Think a lead-in paragraph that describes why organizational characteristics are important to begin with would be useful for the uninitiated. One of the reasons the field is in its current shape is that not all researchers grasp the importance of organizational factors nor have adequate orientation to or knowledge of how to use the frameworks; how to approach, conceptualize or design/develop organizational-level measures, or how to approach their analysis in the context of patient and provider level foci. | Added a bullet point summarizing the importance of examining organizational phenomena.  |

Source: <a href="https://effectivehealthcare.ahrq.gov/products/organization-cancer-care/tech-brief">https://effectivehealthcare.ahrq.gov/products/organization-cancer-care/tech-brief</a>



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| 4 | Peer Reviewer #7          | Executive<br>Summary | In addition to noting 87 studies that measured organizational characteristics related to cancer care, inclusion of some example or notion of what those approaches were or what methods they spanned would be helpful. Page 8, lines 29-30, mention important concepts including "psychological states and traits of organization members." In advance of reading that section of the report, I wanted to note that traits of individual members of an organization may be aggregated to an organizational cultural domain of sorts, as it is less clear that the drill-down to individual organizational member attributes is an organizational characteristic until it is aggregated across the relevant organizational units or organization-wide. For example, team composition is also noted as an important concept that few studies considered, and I would see team composition as an organizational characteristic, but I would not see an individual team member's attitudes or individual professional role as an organizational characteristic per se unless there is a pathway to summarizing as an organization-level construct. | Defined "approaches"  Added an "e.g.," to note what is meant by "psychological states and traits of members" (see Yano comment later)  |
| 5 | Peer Reviewer #7          | Executive<br>Summary | Page 8, lines 33-36, for the 23 "studies that directly assessed how specific healthcare organizational context and process characteristics were related to delivery of cancer care," it would be helpful to include an e.g., for organization- or unit-level outcomes. This report has the important advantage of bringing along the field so the Executive Summary is key to enabling a simple set of takeaways. May want to even consider an e.g., for the patient-level outcomes to contrast them for your readership. Similarly, line 41, with few studies examined diagnostics or diagnostic outcomes, an e.g., would nail the point home without readers having to dive into the full report for greater clarity.  | Addressed as follows: "organization- or unit-level outcomes (e.g., percent compliance with guideline) rather than patient-level outcomes (e.g., screened/not)."  Also inserted an example from one of the studies that addressed cancer diagnosis. |
| 6 | Peer Reviewer #7          | Executive<br>Summary | Page 8, lines 43-47, what is meant by "payment program participation"? May require an e.g., since it does not have immediate face validity or interpretability (does it mean Medicare or Medicaid or something else?).   | Revised the wording to clarify that we're referring to participation in a specific health insurance payment program.   |



|   | Commentator & Affiliation | Section                             | Comment  | Response   |
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| 7 | Peer Reviewer #7          | Executive<br>Summary,<br>Background | The lead-in to the Structured Abstract, Executive Summary, and this section all speak to the integrated framework developed by Weaver, Breslau, and colleagues. As noted for sections above, it would be useful to start with a problem statement about the importance of organizational characteristics to begin with and why such an integrated framework was deemed important to develop. In other words, what were the drivers for doing this work to begin with? It is noted that this was "to advance research investigating the relationship between organizational characteristics and cancer care delivery," but I think that it is still warranted to lay out the logical case for organizational characteristics being worthy study to begin with. In my read, I keep getting a sense that there is a problem they aimed to solve but the problem is not well articulated. This would not be a heavy lift for these authors no doubt, but would be useful for readers who may not be as certain that advancing research in this arena warrants their time and attention (missed opportunity). For example, in work we did on health care coordination frameworks in general (not in cancer care) (e.g., Peterson K, Anderson J, Bourne D, et al. Health care coordination theoretical frameworks: A systematic scoping review to increase their understanding and use in practice. JGIM, 2019), there was an explicit problem of researchers not paying attention to theory in ways that would improve the field, and we explicated why theory use was so important. So the notion here is that adding a problem statement would be a positive addition to the potential impact of this report. | Added in Executive Summary.  Added to background as suggested  |
| 8 | Peer Reviewer #7          | Executive<br>Summary,<br>Methods    | Page 9, Executive Summary Methods: Would add an "e.g.," to Key Informants. A bit more methods specification here would be helpful (e.g., number, type of key informants). Page 9, lines 41-42, what is meant by "to guide the definition and measurement of value"? Value of measuring organizational factors? Not sure I understand intent here. Line 42 is first mention of "multilevel intervention research" and having been involved some in NCI's interests in multilevel intervention research, this strikes me as part of the fundamental problem statement, meaning you cannot advance multilevel intervention research if folks are not conceptualizing, measuring, designing for, and analyzing organizational level metrics. Lines 46-47, an e.g., would be helpful when it says "others focused on organizational characteristic measurement more generally." Love the parentheticals in lines 48-53, making it much easier to understand the constructs and distinctions being made.   | We added information details regarding the number and background of the Key Informants.  We rephrased the clause on value frameworks and clarified what was meant by focusing on organizational characteristic measurement more generally. |



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| 9  | Peer Reviewer #7          | Executive<br>Summary,<br>Results                            | Page 10, Findings for Guiding Question 2 were clearly written with easy takeaways on variations identified (e.g., types of study designs). For Guiding Question 3, would include e.g.'s for organization or unit-level outcomes and for patient-level outcomes to anchor the distinction being made (lines 32-33, page 10). Line 34, would combine sentences "We considered" and "We noted" and use same term (in 1st one they are called classifications and in 2nd one they are categories). This section should include mention of organizational factors and diagnosis or diagnostic outcomes not having much representing in the literature (this is noted in Main Points but not in this section). | Inserted text to provide requested examples. Combined the two sentences as suggested. Inserted a sentence to highlight that few studies addressed cancer diagnosis.                       |
| 10 | Peer Reviewer #7          | Executive<br>Summary,<br>Limitations                        | Page 11, Limitations: May be worth considering whether the state of the literature and the research underlying it (inadequate attention to organizational characteristics in study design, measurement, etc.) is itself a limitation to being able to address Guiding Question 4.  | We added points regarding the limitations of the literature related to Guiding Question 4 to the Limitations sections of Executive Summary and the body of the paper.                     |
| 11 | Peer Reviewer #7          | Executive<br>Summary,<br>Implications<br>and<br>Conclusions | Implications & Conclusions: Reasonable statements made. I am left wondering whether the cancer care research arena would benefit from examining healthcare organizational factors in non-cancer care research. Beyond scope for how this work was conceptualized and conducted, and yet there are other fields of inquiry in health services research where organizational research, at least in terms of measurement, may be transferrable to cancer care research. Something to consider at least moving forward.  | We added points regarding the possibility that research from non- cancer contexts could have been informative to the Limitations sections of Executive Summary and the body of the paper. |
| 12 | Peer Reviewer #1          | Background  | Describes the importance of measuring organizational characteristics in healthcare deliver and the need for this current brief/framework.  | Thank you for noting the motivation for this technical brief.   |



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| 13 | Peer Reviewer #2          | Background | The Background section lays out the need for considering organizational characteristics when designing and disseminating interventions, emphasizing that lack of consideration of organizational factors is a significant reason why interventions fail to implement well. Further, the authors further provide context for consideration of the Integrated Framework. Further description regarding why the Integrated Framework was chosen for evaluation would be worthwhile to better describe the overarching goal of the research and technical brief.   | The Technical Brief authors did not choose the Integrated Framework; evaluating it was part of the specified Guiding Questions. We have added this point to the end of the Background.   |
| 14 | Peer Reviewer #4          | Background | Clear and effective.   | Thank you.   |
| 15 | Peer Reviewer #5          | Background | Building on my general comments the brief provides insufficient background regarding the status of the Integrated Framework. Page 2, line 47, begins a description of the Framework's development and the literature that informed it. But, the reader does not know WHY the NCI team decided to develop the framework, or whether the framework has been pilot tested or used. If it has been tested/used, what was the experience of key stakeholders? Did they perceive value in use of the framework?  | We have added text describing that the framework was developed to list and organize organizational characteristics that could be considered for use in cancer care delivery research. To our knowledge, the framework has not yet been pilot-tested or used. |
| 16 | Peer Reviewer #5          | Background | Page 7, line 20: please better explain the * footnote  | We have clarified the * footnote.  |
| 17 | Peer Reviewer #7          | Background | The lead-in on the importance of measuring organizational characteristics is what I was looking for as even a brief problem statement in the other sections. Maybe something as simple as lines 13-15 starting with Organizational characteristics can influence ABC, yet may not be adequately considered in cancer care delivery research.   | We appreciate the suggestion and have incorporated the relevant text in the Executive Summary.   |
| 18 | Peer Reviewer #7          | Background | Historical perspective section is good – I like the nod to Ron Andersen's access model, and his eventual inclusion of health system characteristics, though he never did the work to explicate what was in that "box" in his model, though it encouraged others to do so just by its addition, hence the importance of these frameworks (same with the Consolidated Framework for Implementation Research [CFIR] they moved the field by getting researchers to think about the relevant "boxes" to begin with and begin populating them with novel measures). | Thank you for the comment.   |



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| 19 | Peer Reviewer #7          | Background | For the Challenges section, I would recommend tightening the sentence on lines 16-17, "it is challenging to determine the effects." Effects of organizational characteristics? (if so, would say "their effects") and either way, would recommend adding "effects on A and B" to complete the thought. I am a little challenged with this 1st sentence on influence vs. effects, so it could be logically tightened.  | We rephrased and tightened the sentence for clarity.   |
| 20 | Peer Reviewer #7          | Background | Line 29-30, what is meant by "social creations"? An i.e. or e.g. may be helpful here.   | Edited to "social constructs"  |
| 21 | Peer Reviewer #7          | Background | Page 13, lines 41-42, think it goes beyond "reliability" to also "impact" of interventions. May want to consider terms like fidelity and be consistent with prior mention of the importance of adapting evidence to local contexts (granted fidelity and adaptation often push against each other but can be copacetic if attention to organizational theory and practice is given).  | Changed " reliability"<br>to "fidelity and<br>impact"  |
| 22 | Peer Reviewer #7          | Background | Development of an Integrated Framework (page 13, lines 50-51): Could a little more attention be paid to what the "prominently cited frameworks and systematic reviews" were? Maybe it is just a matter of moving the citation (3) down to the end of the sentence, but it reads as if there is a widely known set that would be obvious to the reader. Ah, by page 14, I see the list considered, so perhaps it would be helpful to not only move the citation as noted, but also have something like "(see below)" added. Impressive list, and makes me think that one simple lead-in on high for the rationale for the Integrated Framework would be that available frameworks span over 50 years of work, much of it non-cancer-focused, warranting an intentional review and focus on what has been learned and can be readily applied to cancer care research.   | We moved the citation to the end of the sentence and added "see below". We appreciated your description of the frameworks and have incorporated that text, as well.  |
| 23 | Peer Reviewer #7          | Background | Likely beyond scope for this report and the tremendous amount of work therein, but in reviewing the terrific detail underlying the Integrated Framework, I was left wondering the extent to which the authors feel that they have covered Learning Health System domains/constructs. Likely something to consider moving forward, but I could imagine expansion of the Organizational Learning subdomain under Organizational Processes, for example. We have included measures of the availability, for example, of data analyst capacity for capitalizing on EMR data if not also numeracy of clinical leaders for being able to generate, analyze, or act on EMR generated data that would enable evidence-based practice and policy changes (we have measured the former, but not the latter). The Organizational Learning subdomain makes me think further about the LHS competencies and efforts to measure those at the organizational level. I see that the authors included AHRQ LHS Framework, so that may have informed additional measures under this or other Sub-domains already. | The reviewer raises the interesting idea of connecting the organizational characteristic frameworks with the domains and constructs for Learning Health Systems. While we find the notion intriguing, we agree with the reviewer that such considerations are beyond the scope of this report. |



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| 24 | Peer Reviewer #7          | Background           | Improving Measurement (page 18, lines 26-27): I agree with the premise that assessment of organizational characteristics would benefit from greater guidance from organizational theory. That said, it would be helpful to give a nod to what theory(ies) fall into this "bucket" from the authors' perspectives. In prior work, we found it difficult to explicit the optimal organizational theory or theories (my sociology colleagues could cite >100, even if I requested the "cheat sheet" version, which was not regrettably available). I would not suggest inclusion of extensive treatment of organizational theory as that would be beyond scope here, but it may be helpful to give a sentence or two nod to what the authors mean by organizational theory and how that might be accomplished. | Mentioned a few organizational theories that feature specific measurement implications.  Also described utility of one specific theory |
| 25 | Peer Reviewer #1          | Guiding<br>Questions | The guiding questions are appropriate to the task at hand.  | Thank you.   |
| 26 | Peer Reviewer #2          | Guiding<br>Questions | Guiding questions were appropriate. No changes were made or discussed in this section. The questions were straightforward and clear.  | Thank you.   |
| 27 | Peer Reviewer #4          | Guiding<br>Questions | The adaptation of the guiding questions general framework to this specific technical brief was done effectively and served the presentation of findings well.   | Thank you.   |
| 28 | Peer Reviewer #5          | Guiding<br>Questions | Guiding questions do not indicate whether changes were made, which is suggested in our reviewers guide.   | We did not make any changes to our guiding questions.  The reviewer guide was just to help you review the report                       |
| 29 | Peer Reviewer #6          | Guiding<br>Questions | Looking at the frameworks used in guiding question 1 separately from the studies that use the frameworks in guiding question 2 is a valuable approach to ensure that frameworks are separately articulated and understood. As the authors note on page 45, studies often employed implementation science frameworks (which may be more relevant to cancer care interventions), rather than organizational theories. Healthcare clinicians and researchers likely have less exposure to the types of frameworks that guiding question 1 identified.  | We appreciate the comment.   |
| 30 | Peer Reviewer #1          | Methods              | Authors clearly and concisely described the methods used for generating this brief, including engagement with and information gleaned from Key Informants.  | Thank you.   |



|    | Commentator & Affiliation | Section | Comment  | Response  |
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| 31 | Peer Reviewer #2          | Methods | The Methods section was well-written and addressed all three types of evidence sources evaluated. When discussing Key Informant engagement, the authors specified the number and type of informants, as well as described how they were engaged (survey and discussion group). However, themes of the survey and discussion groups were not mentioned and could be included in the description of Key Informant engagement.  | The Key Informants discussion/themes have been added to the appendices.   |
| 32 | Peer Reviewer #2          | Methods | The authors describe how they approached grey literature and published literature searches. They further describe how they use artificial intelligence with use of reviewers to provide consistency and accuracy. Finally, they report on the use of a standardize method for review of literature, including use of multiple team members to participate in the review.   | We appreciate the comment.  |
| 33 | Peer Reviewer #2          | Methods | The authors adequately describe their methods for information management, including what components of the literature they utilized for data abstraction, how qualitative approaches were used to organize data using standard methods, and how each question's specific data was developed. The use of multi-person and multi-level review allowed for thorough review of the literature and less risk for bias given use of more than one person serving in a review role. | We appreciate the comment.  |
| 34 | Peer Reviewer #3          | Methods | Please add a rationale for exclusion—why wouldn't learnings from other countries be useful?: Addresses organizational characteristics outside United States-based health systems/healthcare and focus on cancer care   | We have added text to the Methods and to the Strengths and Limitations explaining that non-US studies were not included, given the unique organization, financing, and delivery of health care in the US. |
| 35 | Peer Reviewer #4          | Methods | Well described. Follows generally-accepted practices with their strengths and limitations.   | Thank you.  |



|    | Commentator & Affiliation | Section | Comment  | Response  |
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| 36 | Peer Reviewer #5          | Methods | Why were accreditation standards not included in the review? That was mentioned in the summary and implications section, but not in the methods that I can see. Some standards seem highly relevant to this work.                          | Accreditation standards were included for Guiding Questions 2-3 but not for Guiding Question 1 as they are more an application of a framework than a description of one. The language in the Summary and Implications section is in a paragraph specific to Guiding Question 1. |
| 37 | Peer Reviewer #6          | Methods | I agree with the authors' conclusion on page 59 that "having multiple perspectives on each stage of the process likely strengthened the rigor and reliability of our research processes."  | Thank you.  |
| 38 | Peer Reviewer #7          | Methods | Under Discussions with Key Informants (page 20, lines 15-16), would be helpful to give a better notion of what was in the "web-based form" (e.g., question types, prompts, domains covered) akin to knowing more about an interview guide. | The Key Informants discussion/themes have been added to the appendices.   |
| 39 | Peer Reviewer #7          | Methods | Excellent inclusion of grey literature. Would add the kind of data that were extracted (page 20, line 33).   | Added.  |



|    | Commentator & Affiliation | Section | Comment   | Response   |
|----|---------------------------|---------|---|--|
| 40 | Peer Reviewer #7          | Methods | Published literature search methods are clearly written with excellent detail for assessing their quality and comprehensiveness. I was not familiar with an AI classification system. The 10% random sample review by paired reviewers makes sense, but there was not mention of how accurate the AI classification system was, and that would seem to be useful (though perhaps that is mentioned under Results). For example, with 10% of the articles being independently checked after AI screening, if I knew how accurate they ultimately were, I would be in a better position to know if 10% was enough. Do the authors have a sense of what they may have missed using these criteria for inclusion and exclusion? For example, was there consideration of a form of sensitivity analysis in how they were applied to see whether key papers might have been missed? The number of eligible papers dropped pretty precipitously and while that is not exactly surprising to me, it made me wonder whether any of the criteria had more or less of an impact on what was included in the final review and analysis. More of a question than something that requires special attention given the thoroughness of the report. | We agree with the reviewer's point and had noted in the Limitations "It is possible that studies that might have qualified for inclusion were missed, but it is unlikely that, given the methodologic nature of this topic, missed studies would substantively alter our findings."  In the review of a randomly selected 10% sample of citations, the discrepancy rate between the AI system and the human reviewer was 2.0% for Guiding Question 1 citations and 8.6% for Guiding Questions 2-4 citations, which is similar to what we usually see when comparing two human reviewers. |



|    | Commentator & Affiliation | Section  | Comment  | Response  |
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| 41 | Peer Reviewer #7          | Methods  | Data organization and presentation: Agree with the decision to not try to "deduce framework components from the text" (lines 37-38), though may want to mention as a limitation in general (more of the state of the literature and how authors fail to explicitly identify frameworks they may have drawn from than about the report itself). Gauging framework use is complex and difficult, and the authors should get credit for the exercise and researchers need to improve their use and reporting. Implications & Conclusions in the Executive Summary could probably be even more direct about this as a challenge and needed recommendation. | In the Limitations, we now note that abstracted categories and characteristics were taken directly from the papers to minimize the need to deduce framework components from the text.  We respectfully opted not to include this point in the Executive Summary Implications & Conclusions. |
| 42 | Peer Reviewer #1          | Findings | The findings contain several tables and figures that compare the Integrated Framework with each of the other frameworks identified and detail which studies correspond with which guiding question. This section is dense, but clear.  | We appreciate the comment.  |
| 43 | Peer Reviewer #2          | Findings | For Guiding Question 1, the authors present a comprehensive analysis of the Integrated Framework, including both topics covered by both the Integrated Framework and areas left out of the Integrated Framework but evaluated in other studies. Table 3 is effective in summarizing the comparison and maps the evidence to the Integrated Framework.  | Thank you.  |
| 44 | Peer Reviewer #2          | Findings | In response to Question 2, Tables 5-7 further summarize the types of measures used to evaluate context and process within an organization. The authors then address specific organization characteristics and how they have been evaluated, including notable drawbacks. The summaries are balanced, with information about each study clearly identified.   | We appreciate the comment.  |
| 45 | Peer Reviewer #2          | Findings | For Question 3, the authors chose to look at outcomes in relation to screening, diagnosis, and treatment. The text is supplemented by tables summarizing the data and mapping characteristics across therapeutic area. Again, the summaries are balanced and the information integrated by therapeutic area.   | Thank you.  |



|    | Commentator & Affiliation | Section  | Comment  | Response   |
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| 46 | Peer Reviewer #2          | Findings | In this section, the authors might also consider including recent assessment tools that ask organizations to assess their delivery of equitable health care or clinical trial enrollment. ASCO and ACCC have recently published pilot data on their tool assessing equitable enrollment in clinical trials, while NCCN published the development of a report card assessing equitable care delivery. While both of these have not yet been validated, they provide additional process and context characteristics felt to be important in equitable care delivery in cancer. | We excluded papers on clinical trial enrollment as not being about Organizational Characteristics that would influence care.  We mentioned the possible use of the NCCN instrument for equity related measurement in the Guiding Question 4b section (how equity considerations may change the way we look at organization characteristics). |
| 47 | Peer Reviewer #2          | Findings | For Question 4, the authors raise a number of gaps in knowledge. They discuss the need for better tools, but should also discuss the need and rationale for standardization of assessments and characteristics. The authors might also discuss how an assessment of equity and disparities intersects with organizational characteristics, and how an increased focus on equity in health care delivery may impact how organizational characteristics are assessed.  | We have added text just before "Summary and Implications" that indicates the benefits and pitfalls of standardization as well as a short discussion of the implications of an equity focus for organizational research in cancer care.   |
| 48 | Peer Reviewer #3          | Findings | page 20 line 2: "the developers of the Integrated Framework can evaluate whether the characteristics in column 4 of Table 3 are already implicitly included in the Integrated Framework, and if not, evaluate the characteristics' relevance and importance to determine whether they should be added." More detail on the methods to be used in the future would be helpful.  | We have added text to the Summary and Implications and the Next Steps describing possible methods to refine the Framework and develop a measures compendium.   |



|    | Commentator & Affiliation | Section  | Comment   | Response   |
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| 49 | Peer Reviewer #3          | Findings | Psychological States/Traits of Providers and Provider Groups are not organization-level constructs; they're individual and group-level constructs so should not be included here.   | Based on the Integrated Framework, we understood the charge to include not only "organization-level" measures. We interpreted it more broadly as including characteristics, phenomena, and processes that occur within organizations that would be studied in organizational science (e.g., macro, meso- and micro-organizational elements). |
| 50 | Peer Reviewer #3          | Findings | Guiding Question 2 is What approaches have been used to measure or improve understanding of the organizational context and process characteristics related to the delivery of cancer screening, diagnosis, and treatment? For a concise report, I recommend a table listing approaches. | We added a table 4 of Guiding Question 2 approaches.   |



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| 51 | Peer Reviewer #3          | Findings | I found it difficult to figure out which findings were related to which GQ. For example, P32 line 16 – I think this answers GQ3 but I'm not sure – these seem like interventions, not characteristics or approaches.   | We have added callouts to identify which question is under discussion. We removed reference to Guiding Question 3 in the introduction to Guiding Question 2. Implementation of interventions is considered a relevant process in this report based on the original Integrated framework. Once an implementation is achieved, it becomes a feature of the organization, e.g., an automated reminder system. |
| 52 | Peer Reviewer #3          | Findings | "Multiple types of organizations are involved in cancer care delivery, ranging from solo practices to large integrated health systems; no standard description of these organization types exists (or perhaps could even effectively be developed).p 46 line 25" The Commission on Cancer has a typology of organizations that may be useful here. | We have added a reference to the Commission on Cancer categories but also note that they apply to the treatment part of cancer care delivery and not the screening, and to some extent, diagnosis aspects covered in the Technical Brief.  |
| 53 | Peer Reviewer #4          | Findings | Presented effectively. I saw no gaps or incorrect interpretations.   | Thank you.   |
| 54 | Peer Reviewer #5          | Findings | Page 40: the use of dots rather than numbers to indicate the number of relevant studies adds work for the reader - why is a number not provided instead?   | We have changed the dots to numbers.   |



|    | Commentator & Affiliation | Section  | Comment   | Response   |
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| 55 | Peer Reviewer #7          | Findings | Results from Discussion with Key Informants: Not sure you need the first sentence since it is a method, and has already been described. Lines 25-26, would benefit from greater explication of meaning of temporal factors and temporal complexity with parenthetical examples.   | Removed first line and added examples  |
| 56 | Peer Reviewer #7          | Findings | Results of the Grey Literature Search: Excellent summary, demonstrating thoroughness of team's efforts. Inclusion of non-cancer care research resources was useful and given comments made above about potential value of doing so suggests that the earlier sections may benefit from clarifying their inclusion since they were, in fact, included. The methods herein are its own valuable resource for readers in addition to what the authorship team did with them in service of the Integrated Framework appraisal. I was interested to see that only 3 of the nearly 25 pieces of grey literature were used in Guiding Questions 1-4 (noted on page 27, lines 17-19). Would be helpful to further clarify why that was the case. Given the description of the resources, it is hard to think that so few included "information pertaining to the frameworks and organizational context/process." Perhaps I am not understanding where the disconnect was but it sounds profound, so a bit more clarification seems warranted. | In the description of the grey literature search in the methods section, we added to text to explain that "Extracted items included the organizational frameworks used and organizational constructs and measures listed. Sources were excluded if they were published in peer reviewed journals or were not specifically set in the cancer care context." |



|    | Commentator & Affiliation | Section  | Comment  | Response  |
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| 57 | Peer Reviewer #7          | Findings | Results of the Published Literature Search: I am struck by the shift from >4400 records to 78 for full text review (page 27, lines 45-46). I looked at Figure 1 (page 28) and that suggests that they failed the screen relying on title and abstract review. While there is no going back and the current report is an important contribution, I do wonder what was missed by relying on titles and abstracts, so wondered whether a sort of sensitivity analysis was done (again, probably beyond scope). I raise this only because of how difficult it is to fit in the necessary words in a title or abstract to begin with, such that naming the framework I may have used is kind of low on my priority list. And for many journals, there is no value-add to editors/reviewers to do so, as they may or may not be interested in theory or frameworks. That said, I recognize that this kind of conceptual review requires reasonable boundaries, and the purpose for at least Guiding Question 1 was about framework themselves. For the other Guiding Questions, however, one might have learned about organizational characteristics used in the absence of frameworks in ways that might have been useful. Similarly, a bit more information on the drop-off to 10 (and then down to 8) would be useful. I see that there were indeed articles excluded for not directly reporting on frameworks (page 27, lines 50-51) and appreciate the due diligence of the manual searching. | The literature search strategy was purposefully broad in terms used and databases searched to try to capture the relevant literature. However, the use of terms such as "structure" and "framework" yielded a large number of basic science papers that address cellular structures. As such, the review based on title and abstract was generally very clear. Any papers that were potentially relevant to organizational frameworks were selected for full-text review.  We include a paragraph on the Guiding Question 1 literature selection in Limitations that covers the |
|    |                           |          |  | relevant points.  |



|    | Commentator & Affiliation | Section  | Comment  | Response  |
|----|---------------------------|----------|--|---|
| 58 | Peer Reviewer #7          | Findings | Results of the Published Literature Search: The authors note of 34 frameworks identified by the KIs or articles, nine were included. That demonstrates the value-add of the team's inclusion of KI interviews. Does it also point to the potential for more untapped literature? Perhaps that is already noted in the full report's limitations. For example, had you engaged more KIs, perhaps even more otherwise untapped frameworks might have been identified (though I anticipate diminishing returns as well and respect the judgment calls that had to be made). | We appreciate this point. Most of the additional frameworks emerged from the hand search. We do address the possibility of missed literature in the Limitations, "Given that we found few characteristics in the 17 abstracted frameworks that were not already covered in the Integrated Framework, it is unlikely that any excluded frameworks would have substantially affected our findings. Arguably, some of the frameworks that were included could have been excluded. Again, this is a grey area." |
| 59 | Peer Reviewer #7          | Findings | Results of the Published Literature Search: Appreciate the inclusion of reasons for exclusion in Figure 2 (page 29) – easy to follow and understand – no concerns.   | Thank you.  |
| 60 | Peer Reviewer #7          | Findings | Guiding Question 1: As As noted above, on page 30, line 15,<br>"organizational characteristic measurement more generally" it would be helpful to include an e.g. so that the distinction is that much more clear.  | We revised the text<br>here, consistent with<br>the changes made in<br>the Executive<br>Summary.  |
| 61 | Peer Reviewer #7          | Findings | Guiding Question 1: Not sure what is meant by lines 18-19, "Others included fewer organizational characteristics, thought he framework as a whole may have been more extensive." Would it be possible to give an example?  | We have added an example.   |



|    | Commentator & Affiliation | Section  | Comment   | Response   |
|----|---------------------------|----------|---|--|
| 62 | Peer Reviewer #7          | Findings | Guiding Question 1: Page 30, lines 55-56 going to page 31, noting that inclusion in another framework does not mean it should be added to the Integrated Framework does not seem like a Finding but instead an Implications & Conclusions statement.  | We appreciate the reviewer's point but have opted to keep that paragraph as helpful in interpreting the findings.  |
| 63 | Peer Reviewer #7          | Findings | Guiding Question 1: Just need to remark on the remarkable amount of work and its value in Table 3. Might consider bolding or underlining the subdomains in the 3rd column so that they stick out more clearly from the bulleted examples underneath as it gets a little overwhelming to review this level of (nonetheless useful) detail. | We appreciate the positive assessment of our efforts to develop Table 3. We have bolded the subheadings as suggested.  |
| 64 | Peer Reviewer #7          | Findings | Guiding Question 2: Also well written. Page 39, line 8, interested in what fell beyond screening, diagnosis and treatment so suggest adding an e.g., to "other aspects of cancer care."   | Examples of "other aspects of cancer care" have been added to the text to help clarify.  |
| 65 | Peer Reviewer #7          | Findings | Guiding Question 2: Page 40, line 38, may be helpful to have an e.g., for "myriad of cancer care contexts." Thorough presentation of findings throughout this section.  | We have clarified the text. "Myriad of cancer care contexts" refers to other aspects or multiple aspects of cancer care, examples are given in the summary paragraph at the beginning of the Guiding Question 2 section. |
| 66 | Peer Reviewer #7          | Findings | Guiding Question 2: Page 43, line 23, looks like there is an errant right parenthesis (one too many) after "(1 study, multi-state)97)."   | Thank you.   |
| 67 | Peer Reviewer #7          | Findings | Guiding Question 2: Missing comma after e.g. on page 44, line 30.   | Addressed, thank you.  |
| 68 | Peer Reviewer #7          | Findings | Guiding Question 2: page 44, line 35, what does "incentives for primary performance" mean (is it missing "care" in "primary care performance" or some other meaning)?   | Thank you for the catch.   |



|    | Commentator & Affiliation | Section  | Comment  | Response  |
|----|---------------------------|----------|--|---|
| 69 | Peer Reviewer #7          | Findings | Guiding Question 2: page 44, line 36, is it correctly stated as "staffing skill types"? Or is it "staffing, skill types, beliefs,"? If it is correct, I don't entirely know what "staffing skill types" means, so would benefit from clarification. I usually measure staffing levels, staffmix, and maybe availability of particular clinical expertise (e.g., cardiology), but not a staffing skills type.   | Added comma:<br>"staffing, skill types"   |
| 70 | Peer Reviewer #7          | Findings | Guiding Question 2: Under Psychological States, I now better understand the intent of the category compared to the abstract and executive summary, which suggests to me the potential value of adding something like an "(e.g., burnout)" to earlier mentions in those necessarily much shorter sections of the report.  | Added this for clarification in earlier sections of the report.   |
| 71 | Peer Reviewer #7          | Findings | Guiding Question 3: Well written and clearly laid out. Figure 6 (thematic categorization) made me wonder if there would be value to having a comparable figure for Guiding Question 2.   | We added a figure for<br>Guiding Question 2<br>themes that is similar<br>to Figure 6 (for<br>Guiding Question 3). |
| 72 | Peer Reviewer #7          | Findings | Guiding Question 3: Page 54, line 19, does affiliation refer to academic affiliation? Or affiliation to a cancer network? Or something else? Some minor clarification would be helpful. Similarly, in the same line, is location urban/rural or something else? Is it more about geography or location in a health system? A little clarification would make the takeaway point that much easier. Centralization is mentioned as a term in several places in the report but without definition or "i.e.," or "e.g.," and might benefit from a little explication.  | Definitions are listed in the table 1a.  Centralization has been defined in several places                        |
| 73 | Peer Reviewer #7          | Findings | Guiding Question 4: One of the challenges brought forward in this section is the varying terminology used in the literature. This is a major challenge but not so readily addressed given that it is my sense that part of the problem is also the strength of work in this field, namely that so many different disciplines are involved in measurement of organizational characteristics and each discipline has its own theories, standards for measurement, terminology, etc. I found this to be the case at the Organization Theory in Health Care Association meetings, where researchers from health services research, sociology, psychology, anthropology, business schools, and more come together to advance health care organizational research and come from very different schools of thought. It is probably beyond scope for this report to come up with the solutions on top of doing a solid job of laying out the issues, but it may be helpful to give a nod to what might be required to improve terminology and unit of analysis and other related issues. | We propose a path to greater standardization (as well as mentioning pitfalls) in the Next Steps section           |



|    | Commentator & Affiliation | Section                        | Comment  | Response  |
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| 74 | Peer Reviewer #7          | Findings                       | Guiding Question 4: Appreciate the explanation of temporal factors here with an example that anchored the points made. Lack of investigation of the mechanisms by which organizational characteristics exert their influence (or fail to) (page 56, lines 55-56) is an important lesson learned here and could be expounded on a bit further. I did not find the example provided on organizational ownership as the right segue after this important point (or needs a segue since the authors appear to be making a distinct point beyond mechanisms).   | We agree and have re-worked the paragraph                                     |
| 75 | Peer Reviewer #7          | Findings                       | Guiding Question 4: The gap in organizational measurement vs. use of organizational theories is an another important one contributed in the answer to Guiding Question 4 (page 56, lines 43-43). Given the plethora of organizational theories, I wonder whether the KIs had anything to add when it came to figuring out how to use them more effectively as noted above. The challenges in achieving valid and reliable organizational characteristic measures and absence of information on psychometric performance is also a key point made (lines 47-48, also page 56). I will look to the conclusions section to see if there are recommendations for ameliorating this problem, but can say that one of the barriers is the difficulty in getting funding for measures development and the mismatch between available psychometricians and those who do organizational or multilevel research in general and probably in cancer care specifically. | We have made this point in general terms in Guiding Question 4 and next steps |
| 76 | Peer Reviewer #7          | Findings                       | Guiding Question 4: The points made on page 57 (lines 30-43) tell a compelling story about the complexity of how cancer care that a patient experiences may indeed span several organizations and within those a large number of organizational units, let alone providers and staff. The point that is missing here is the organizational context in which that complexity also resides, which is brought up elsewhere in the report (e.g., local environments, areas) but may be a missed opportunity to not mention here as well.   | This excellent point has been added.  |
| 77 | Peer Reviewer #1          | Summary<br>and<br>Implications | The summary is concise and clear. While major gaps are discussed, it mostly refers back to guiding question #4, which is about gaps in the literature and ideas for future research (which is fine). (This isn't a criticism, just a note.)  | We appreciate the comment.  |



|    | Commentator & Affiliation | Section                        | Comment  | Response   |
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| 78 | Peer Reviewer #2          | Summary<br>and<br>Implications | Overall, the summary and implications section could be expanded to provide an overarching picture of the current state of the science. While the authors summarize what they have done, there is less discussion about the important issues. What makes the Integrated Framework an optimal tool for use in evaluating organizational characteristics? What additional refinements or research needs to be done to improve its use in evaluating organizations?                      | We have added text to the Summary and Implications noting the benefits of using frameworks in general, and pointing out the comprehensiveness of the Integrated Framework in particular. The Next Steps now also describe possible methods to refine the Framework and develop a compendium. |
| 79 | Peer Reviewer #2          | Summary<br>and<br>Implications | The summary of findings for questions 2-4 is short and could be expanded to provide an overview of the most common organizational characteristics measured and the most common methods for measurement. In addition, the authors might discuss further the need for standardization of measures, given the lack of standardization found.  | New Tables provide additional "at-a-glance" summarization.  Added discussion of standardization in Guiding Question 4.   |
| 80 | Peer Reviewer #2          | Summary<br>and<br>Implications | For guiding question 4, the authors describe the most common themes identified, stating "these and other gaps" lead them to conclude that organizational features are important to assess. What other gaps? Where should the research go next? What is the most important next steps for the field? Should it be standardization or identifying the most important features? Expanding on the implications of gaps could help further define where further research should go first. | Removed "other gaps" as a distracting phrase  A statement about most important next steps has been added just before Summary and Implications section  |
| 81 | Peer Reviewer #3          | Summary<br>and<br>Implications | A table of implications would be helpful.  | We've added a single table for implications & next steps   |



|    | Commentator & Affiliation | Section                        | Comment  | Response  |
|----|---------------------------|--------------------------------|--|---|
| 82 | Peer Reviewer #4          | Summary<br>and<br>Implications | I have two suggestions, both to better serve research on cancer care delivery and a broader audience of researchers addressing other clinical areas.  1) The brief mentions the lack of consistency in terminology in several places, and I believe this requires even more emphasis in the Summary and Implications. First, "organization structure" is used inconsistently in the literature, having both a broad connotation following Donabedian and a more specific one referring to "the segmentation of an organization into sub-units and the integrating mechanisms that are intended to span those sub-units." (Charns and Bolton, "Commentary on Burns, Nembhard and Shortell, Integrating network theory into the study of integrated healthcare: Revisiting and extending research on structural and processual factors affecting coordination" Social Science & Medicine, 2022). Some organization characteristics would be considered structure by some authors and not by others. Some discussion of the distinction between organization structure and organization characteristics would enhance the technical brief.  1a) Not having consistent use of terminology makes it very difficult to measure organization characteristics, including structure, even in the narrowest use of the term. For example, I have found it impossible to determine actual hospital structures with a survey or single interview question or review of a table of organization. It is difficult to determine whether a hospital has a free-standing cancer center (and what professions and medical specialities are contained within it) or if cancer care is organized by teams of professionals and specialists who are members of different hospital departments. The field needs to address this problem. | Definitions provided at the beginning of the methods section  Organization structure point has been added to mention of inconsistent terminology in Guiding Question 4  Note added about link between terminology and measurement |
| 83 | Peer Reviewer #4          | Summary<br>and<br>Implications | 2) There is information in the broader organizations literature that could inform research on cancer care delivery. Also, some of this organizations literature as well as literature specifically on cancer care was published prior to 2010. To accomplish the work of this technical brief, it was necessary to limit the search to articles on specifically on cancer from 2010 forward. I suggest that the technical brief include a statement of this limitation and potential contributions from the larger and the older literatures.  | We have added these points to the Strengths and Limitations.  |
| 84 | Peer Reviewer #7          | Summary<br>and<br>Implications | Well written and logically organized section. Minor errant word ("a") on line 20, should we "We sorted these studies by whether they focused" (not "We sorted these studies a by whether").  | We removed the typo. Thank you.   |
| 85 | Peer Reviewer #7          | Summary<br>and<br>Implications | Page 58, lines 32-33, would consider adding not only fruitful areas for future research but also important areas needing methodological advances.  | We believe these are covered under section 4b.  |



|    | Commentator & Affiliation | Section                        | Comment  | Response   |
|----|---------------------------|--------------------------------|--|--|
| 86 | Peer Reviewer #7          | Summary<br>and<br>Implications | Overall, given the volume of studies that looked at total care models, I am struck by the lack of organizational interventions focused entirely on cancer care structural/process/context studies. I am aware of NCI's efforts to train investigators on multi-level interventions, for example, but the missed opportunity for major advances in cancer care research is stunning. I applaud this work, and hope that efforts to change training, mentorship, incentives for multi-level/organizational interventions, the caliber of scientific review in this arena, etc., are outcomes of this effort to advance integrating frameworks to optimize progress among field-based researchers. I wonder whether the authors might speak to organizational interventions in addition to organizational characteristics a bit further in the Summary. | We appreciate the reviewer's vision!  A mention of these possible outcomes has been added to the Next Steps section.  In addition, we added discussion of organizational interventions specifically for cancer care in Guiding Question 4. |
| 87 | Peer Reviewer #7          | Summary<br>and<br>Implications | Consistent with my suggestion that a sentence be added about methodological advances that are needed (in addition to more research in general), I think greater integration of organizational measures will also require stronger training in multilevel and hierarchical analyses, as well as other approaches to ferreting out the relationships at the organizational, provider, and patient levels (e.g., "old school" structural equation modeling, improved approaches to handling mediators and moderators), in addition to the very apt recommendations in the report. It might be helpful for scientific policymakers if this report were to take that recommendation a small step further to recommend explicitly attention to funding organizational methods themselves.  | We have added these suggestions at the end of the report.  |



|    | Commentator & Affiliation | Section                        | Comment  | Response  |
|----|---------------------------|--------------------------------|--|---|
| 88 | Peer Reviewer #7          | Summary<br>and<br>Implications | Page 59, lines 12-15, one of the challenges in writing a report that compares and contrasts a framework designed by the authors (if I understand this correctly) to the broader literature and expert (KI) input is the potential for sounding defensive about the original (preferred?) framework, in this case the Integrated Framework. For the most part, the authors do a laudable job of walking the line here and truly advance a strong, useful, and important product. The example in lines 12-15 actually raise a concern for me insofar as I do not see a relatedness between "financial insolvency" which is in the Integrated Framework, and measures of "slack resources" so would generally recommend the authors be very cautious in assuming the Integrated Framework term actually embraces some of those they found in other frameworks. Slack resources has little or nothing to do with solvency, depending on how it is defined in the literature or in specific studies, so this example gave me pause rather than cement the notion that the Integrated Framework covers the concepts so readily. Rather than make decisions about what might be culled from this exercise to further improve the Integrated Framework, this section seemed to say that was beyond their mission and that it is up to others to decide. That seems to be a step shy from what could have been done to enhance the Integrated Framework a bit further from all of this effort. In the Next Steps section (page 59), it would suggest that the Integrated Framework developers are distinct from those who authored this work, such that they suggest the developers "should evaluate the relevance and importance of variables found in other frameworks" Given the work undertaken here, I suspect the authorship team has a notion of what ought to be added at this juncture, but suspect that it was not in their purview to take it that far. I am left wondering what comes next for the Integrated Framework but perhaps that next step will be published subsequently. Just raising the question. | The Technical Brief authors were not involved in the development of the Integrated Framework. The author list has now been added to the front matter, which will hopefully clarify this point.  We have removed the example of slack resources to avoid confusion.  The discussion of Next Steps has been expanded to provide more concrete suggestions for how the findings from this Technical Brief could be evaluated for potential refinement of the Integrated Framework. |
| 89 | Peer Reviewer #7          | Summary<br>and<br>Implications | Finally, in reviewing the report, I wondered whether a potential outcome of this report might be the generation of scientific and/or publication guidelines for these kinds of studies to prompt cancer researchers on reporting expectations that would make this kind of work easier in the future. Just thinking about what has been done with CONSORT guidelines and their adaptation to different study design types (e.g., cluster RCTs), and while those are for study designs, I could imagine a comparable guide to organizational research. Maybe that is its own manuscript that could emanate from this work given the team's now extensive expertise. These ideas emanate from the challenges laid out under Guiding Question 3, and the gaps in knowledge under diagnosis and treatment outcomes.  | We have added this idea to the Next Steps section.  |



|    | Commentator & Affiliation | Section                        | Comment   | Response  |
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| 90 | Peer Reviewer #7          | Summary<br>and<br>Implications | Thank you for giving me this opportunity to review this important work and contribution to the field.   | Thank you for your positive assessment of the Technical Brief.  |
| 91 | Peer Reviewer #1          | Next Steps                     | Authors suggest a very concrete next step: development of a compendium of measures, definitions, and measurement approaches to assist researchers in this space.  | Thank you for this comment.   |
| 92 | Peer Reviewer #2          | Next Steps                     | The authors support the Integrated Framework for evaluating organizational characteristics, but note that additional variables not included in the current version should be considered for inclusion. However, the authors do not take a position on whether these variables have enough weight to definitively be included in this Framework. The authors also discuss the benefit of a compendium of measures for researchers to use in measuring organizational characteristics. It is not clear whether that compendium should be the Integrated Framework, or whether it should be inclusive of the Integrated Framework and other variables previously not included. Further delineating the contents and usability of the proposed compendium may be helpful to support the development of this work. | We have added text to the Summary and Implications and the Next Steps describing possible methods to refine the Framework and develop a compendium. |
| 93 | Peer Reviewer #3          | Next Steps                     | A table of next steps would be helpful.   | We've added a single table for implications & next steps.   |
| 94 | Peer Reviewer #4          | Next Steps                     | Just as NCI has been a leader in recognizing, educating and promoting multi-level interventions and measurement, NCI could also be a leader in addressing the high variability in how organization characteristics are conceptualized and the associated inconsistent terminology. The work of Weaver, Breslau and colleagues and this technical brief make important contributions toward that goal. The brief also suggests that a "compendium of measures, suggested definitions and measurement approaches" be developed. Can the brief suggest that NCI alone or in collaboration with other parts of NIH, AHRQ and VA sponsor a state of the art conference, similar to the conference on multi-level interventions, as a key step in developing this compendium?                                       | Thank you for this suggestion, we have repeated it in the report.   |
| 95 | Peer Reviewer #5          | Next Steps                     | Next Steps also would benefit from the statement of need. Integrated Framework developers should consider these recommendations because   | We added a framing sentence for Guiding Question 1 and one for Guiding Questions 2-4.   |



|     | Commentator & Affiliation | Section                  | Comment   | Response  |
|-----|---------------------------|--------------------------|---|---|
| 96  | Peer Reviewer #6          | Next Steps               | The authors' comprehensive approach helped ensure that the Integrated Framework comprehensively includes the most relevant characteristics of cancer care delivery organizations. The additional characteristics that were identified from other frameworks and not included in the Integrated Framework are worthy of consideration for inclusion.   | Thank you for confirming our suggestion that the Integrated Framework developers consider the additional characteristics for inclusion. |
| 97  | Peer Reviewer #6          | Next Steps               | I agree with the report's conclusion that "there needs to be a balance between completeness of the framework and degree of complexity." The standardization that the Integrated Framework employs could help lead to more uniformity across this field  | We appreciate the comment.  |
| 98  | Peer Reviewer #2          | Clarity and<br>Usability | The report was dense, with lots of description regarding various cohorts of studies. The figures and tables were very helpful in summarizing the data at a glance.  | Thank you.  |
| 99  | Peer Reviewer #1          | General                  | Excellent technical brief. This a clear and comprehensive description of the problem, the process, and the findings. Well done!   | Thank you.  |
| 100 | Peer Reviewer #2          | General                  | The technical brief provides a comprehensive overview of currently available evidence regarding evaluative frameworks for organizational characteristics, a summary of the types of characteristics evaluated, and identified areas of unmet need. The authors also describe limitations of the studies evaluated and identify areas of potential improvement for the most comprehensive framework.   | We appreciate the comment.  |
| 101 | Peer Reviewer #3          | General                  | General Comments: Thank you for the opportunity to review this technical brief. My understanding is that the guiding questions related to culling information regarding frameworks potentially related to the Weaver/Breslau Integrated Framework to support that framework's refinement; understand approaches to improve understanding of description, measurement, and analysis of organizational context and process; identifying empirical studies of org context and process in cancer care; and identifying evidence gaps and future research needs. I identified three main concerns regarding the technical brief: | We address the concerns below.  |



|     | Commentator & Affiliation | Section | Comment  | Response  |
|-----|---------------------------|---------|--|---|
| 102 | Peer Reviewer #3          | General | 1. Follow-through on drawing on organizational theory vis a vis the guiding questions. Page 7, line 25: "Several important points emerge from the above background. First, the assessment of organizational characteristics would benefit from greater guidance from organizational theory." However, I was unable to identify text in the background to support this. I certainly believe it to be true and extremely relevant for this project, but the rationale is not clearly articulated in the background. From my perspective, theory is needed to guide interventions to accommodate or modify features of organizational context and processes based on clear understanding of mechanisms underlying the relationship between organizational characteristics and cancer outcomes. Theory would help to address what the authors call "The decisional dilemma [of] 'how can we define and measure organizational characteristics to improve research on cancer care delivery and enhance cancer care and outcomes?' by identifying interventions that are likely to address the mechanisms underlying org characteristics and cancer outcomes. Related, none of the guiding questions related to incorporating guidance from organizational theory, representing a missed opportunity to derive such guidance from extant work. I recommend explicit extraction of data from frameworks and approaches and studies identified in response to GQs1-3 regarding incorporation (or lack thereof) of theory. This would give the authors the evidence necessary to explain their finding: "We noted that studies may connect organizational characteristics and cancer outcomes but may not investigate mechanisms by which these effects are produced." This finding speaks to the lack of theory in extant studies of organizational characteristics that might otherwise elucidate these mechanisms. | First, thank you for pointing out the non sequitur sentence in the Background regarding theory. In an effort to keep the Background succinct, we had deleted a more involved discussion of theory and simply included the 2 <sup>nd</sup> sentence under Challenges in Measuring Healthcare Organization Characteristics. To avoid confusion, we have deleted the sentence highlighted in your comment.  Also, while we appreciate the suggestion to address theory more extensively, as you point out, the Guiding Questions do not address theory, and the limited scope of a Technical Brief requires focused attention to the assigned questions. |



|                 | Commentator & Affiliation    | Section             | Comment         | Response  |
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| 102<br>(cont'd) | Peer Reviewer #3<br>(cont'd) | General<br>(cont'd) | (comment above) | However, we agree with many of the points you have raised and have incorporated them in text of Guiding Question 4. |



|        | ommentator<br>& Affiliation | Section | Comment   | Response  |
|--------|-----------------------------|---------|---|---|
| 103 Pe | eer Reviewer #3             | General | 2. Stratification of findings based on the cancer care continuum is not justified. The relationship between organizational context and processes and stages along the cancer care continuum, including screening, diagnosis, and treatment, is unclear. Are organizational context and processes expected to differ along the cancer care continuum? Or are the implications of organizational context and processes for care expected to vary along the continuum? How do these stages relate, if at all, to the guiding questions? If there is a rationale that can be articulated, the rationale for the exclusion of survivorship is unclear. A notable omission perhaps resulting from this exclusion is Nekhlyudov's framework for survivorship care outcomes in response to GQ1. | We appreciate your perspective that the stratification of findings based on the cancer care continuum is not justified, but the Guiding Questions specifically focused on screening, diagnosis, and treatment, and we were asked to present our findings in these categories. We did note differences among the organizational characteristics along the continuum—e.g., screening mostly takes place in ambulatory settings (cancer-focused and general care practices). Also, as you point out, the Nekhlyudov framework was not identified through our literature search, likely because it focuses on survivorship specifically. It therefore does not meet inclusion criteria. We included a mention of this gap |



|     | Commentator & Affiliation | Section | Comment  | Response   |
|-----|---------------------------|---------|--|--|
| 104 | Peer Reviewer #3          | General | 3. Definitions of key concepts, including the fundamental concept of organizational context and processes, is needed. As currently written, the distinction among characteristics of organizational context and processes is unclear. Specifically, the constructs in Table 4 seem to combine org chars with initiatives when, in reality, characteristics of organizational context, such as leadership, might what I imagine the authors might conceptualize as processes, such as participation in total care delivery models or implementation of improvement projects. Not distinguishing between these constructs has the potential to obscure causal relationships among them. Adding some clarification of analytic methods may be helpful with this. For GQ2, it seems that the analysis to identify themes that ended up in Table 4 was inductive ("We relied on a qualitative approach using a process of thematic classification into topical categories with dual coding to classify 87 studies identified as relevant through the full-text screening process (page 12, line 12), but this is not clearly articulated. I would encourage the study team to use a more deductive approach to identify themes based on the Integrated Framework. Without some kind of conceptual anchor for this analysis, the findings reported in Table 4 and the accompanying text feels idiosyncratic and its relevance vis a vis the guiding questions unclear. A related example of this need for clearer definitions is the identification of patient navigation from Zapka 2012. From my perspective, patient navigation isn't a characteristic of organizational context or processes; it's related to task coordination, a construct featured in many organization theories. And the population health management and medical homes in Modica 2020 I view to be resources that are outcomes of organizational context and process characteristics rather than characteristics in and of themselves. Same with "accessible" and "evidence-based" from Teckie 2012; it is unclear these constructs can be thought of as ch | As relates to the categorization of characteristics in Table 3, we used what the framework authors reported. We have added this point to the Methods. In the Strengths and Limitations, we also added that these categorizations of the characteristics are debatable in some cases. We have added definitions of how we understand context, characteristics and processes, measure, and construct in appropriate places. We identify which themes are context elements or processes throughout the write up of Guiding Question 2. We have added mention of the inductive process to the methods. We pursued an inductive process with the expectation that it could be revelatory regarding the completeness/ level of nuance described in the Integrated Framework. |



|                 | Commentator & Affiliation    | Section             | Comment  | Response   |
|-----------------|------------------------------|---------------------|--|--|
| 104<br>(cont'd) | Peer Reviewer #3<br>(cont'd) | General<br>(cont'd) | (comment above)  | To address the reviewer's concerns, we have added mention of how the inductively identified themes related to the Integrated Framework elements.   |
| 105             | Peer Reviewer #4             | General             | This technical brief is well done and clearly written. Its description of the literature, as organized by the guiding questions, is well executed and I have no critiques to improve the first sections of the brief. I do, however, have suggestions for the Summary and Implications and for Next Steps.             | Thank you!   |
| 106             | Peer Reviewer #5             | General             | It's unclear to the reader why AHRQ is preparing a technical brief about a 'recently drafted' Integrated Framework. What was it about this Framework that generated enough interest to warrant this additional work? What is the statement of need? Without this context, the report is less meaningful to the reader. | We have added text in the Background describing why the Framework was developed. At the end of the Background, we describe the Technical Brief's role in evaluating its comprehensiveness. These results, along with the information in Guiding Questions 2-4, can inform a compendium that will serve as a resource to promote the inclusion of relevant organizational characteristics in cancer care delivery research. |
| 107             | Peer Reviewer #6             | General             | The authors do a comprehensive job of surveying the literature to determine whether the proposed Integrative Framework adequately covers the organizational context and process characteristics relevant to cancer care delivery research.   | Thank you.   |



|     | Commentator & Affiliation | Section | Comment  | Response   |
|-----|---------------------------|---------|--|------------|
| 108 | Peer Reviewer #7          | General | This is a clearly written and thorough treatment of frameworks for describing, measuring, and analyzing organizational characteristics in the cancer care delivery research field. I think the report will be an important contribution to the field and warrants diverse dissemination routes to get to those in the field who need to attend to these measures to enhance the quality and impacts of their research. | Thank you. |