

Article details: 2020-0039	
Title	Patient and physician perspectives on shared decision-making for coronary procedures in people with chronic kidney disease: patient-oriented qualitative study
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Reviewer 1	Dr. Annette McKinnon
Institution	Patient Advisors Network, Steering Committee
General comments (author response in bold)	<p>I am delighted to review a qualitative submission that looks at Shared Decision Making from both sides - patient and specialist, and in acute care where time is scarce and decisions have life changing effects.</p> <p>1. In the abstract you said " supported by a patient advisory group, which included 4 patients with CKD or caregivers who partnered to inform the design and conduct"</p> <p>2. The language in the lay summary shows more patient partner centricity to me ie "We partnered with 4 patients / caregivers with CKD to design and conduct a qualitative descriptive study, analyzed thematically." through emphasizing partnership rather than the weaker 'patient advisory group' We have revised the abstract to include more patient partner-centric language, similar to the lay summary. Page 2 Abstract: "Methods: We partnered with 4 patients / caregivers with CKD to design and conduct a qualitative descriptive semi-structured interview study."</p> <p>3. I wonder if you could clarify this sentence ..."cardiologists identified an importance to their role in guiding patients towards invasive versus conservative treatment "? Maybe 'the importance'?" We have elaborated by adding that the importance was in providing an evidence-informed discussion of the invasive versus conservative treatment decision. Page 3, Plan Language Summary: "Cardiologists identified the importance to their role in guiding patients towards evidence-informed medical decisions based on their clinical assessment of a patient's benefits versus risks as well as values and preferences."</p> <p>4. On page 5, line 6 reimbursement is inaccurate - this payment sounds more like compensation or an honorarium in appreciation for their time. We agree and have made this edit. Methods, Page 7: "Participating patients and family members/caregivers were provided an honorarium of \$50 (CAD)."</p> <p>5. In sources of data, I learned that you interviewed 20 patients and 10 doctors. When you say interviews ceased when no new info was found, ie saturation do you mean all 30 interviews were analyzed and used? Yes, all 30 interviews were analyzed and used. We have clarified this in the methods section. Methods, Page 8: "Three research associates (JLF, PJ, TW) inductively analyzed all 20 of the patient/caregiver and 10 cardiologist transcripts using</p>

conventional content analysis.”

6. Under patient engagement you have the patient advisors meeting on a recurring basis over the duration. Who did they meet with beyond one another. Were they included beyond those areas listed on page 6? Did the patient have access to the papers in the references if they wanted to see them? Were they invited to participate in the data analysis, at least for a few transcripts to see if their interpretations of what was said differed from the rest of the team? These actions could strengthen the insights and help to build capacity in the patients.

We have clarified in the text that the patient partners met along with the other research associates on the project team. Background information (with references) on the study was provided to patient partners at the outset and patient partners took part in reviewing, informing and revising our study design, contributed to the protocol (ensuring methods selected were appropriate for patients), and helped develop interview guides. They were active study members in other research aspects including our team meetings to review coding of the interviews, which helped provide additional interpretation of the findings from transcripts. They have also participated in knowledge translation activities, including contributing to this publication and conference presentation.

Methods, Page 8,: “Our study was supported by 4 patients / 1 caregiver with CKD who met with other members of the research team on a recurring basis for the duration of the study and provided input to the programme of research. Patients partnered with us to inform the design of the study, the study information material for patients, as well as the interview questions for patients. During the analysis, 2 patient partners (WP, CC) also commented on the findings to broaden the interpretation and credibility of the themes identified. They also contributed to the dissemination plan including coauthoring the manuscript and presenting at the Can-SOLVE CKD annual meeting (www.cansolveckd.ca).”

Results

7. This sentence might read better as According to cardiologists it was often quite difficult for patients, particularly the elderly to understand the risks,

We have made the suggested edit.

Methods, Page 10: “It was often quite difficult for patients, particularly the elderly, to understand the risks.”

8. For the delay in decisions do you mean the patient delay ie "potential risk of adverse effects while 'patient is' trying to decide?

Yes, thank you. We made the suggested edit.

Methods, Page 11: “...possibility for delayed decision-making to increase the potential risk of adverse effects while the patient is trying to decide.”

9. On page 9, line 6 there is a closed quote with no start quote signal.

Thank you. We have added the start quote.

10. Aside from mostly small issues above I find myself thinking of the doctors worrying about their agency, and especially the loss of it. Will the SDM tool be an algorithm that patients and doctors will be urged to follow despite patient wishes

and clinical expertise? This would take away SDM from both parties.

We believe that a future decision tool to support shared decision-making should not be a prescriptive algorithm for patients and doctors to follow but instead should be an aid for decision-making that helps patients and doctors communicate anticipated risks and benefits and share values and preferences, thereby allowing patients and physicians to make decisions that incorporate best estimates of outcomes and patient preferences. We have emphasized how the findings from our study inform the design of such tools for SDM in the discussion.

Interpretation, Future Directions, Page 17: “Our findings suggest that strategies and tools for shared decision-making in this setting should address patient uniqueness and variability in values and preferences, and incorporate physician agency and clinical judgement, which were perceived as important by both patients and physicians.”

11. Also I see nothing about patient agency being lost, respected or referred to. It is not the precise term they might use but did this come up in any other way?

Interestingly none of the patients or physicians we interviewed expressed concerns about patient wishes not being respected. We suspect this may be the case because we framed our interview questions around shared-decision-making, which explicitly recognizes that patients play a central role in their decision-making process. In fact, we found that several patients were comfortable deferring their decision to the recommendation of the cardiologist as they perceived them as the experts, had trust in their expertise, and confidence that their recommendations would result in the best care. We have described this perspective from patients in the results section.

Results, Page 11: “This was attributed to patient perceptions of the cardiologist as the expert and the comfort patients expressed in thinking “the doctor should decide”. Patients spoke about trust in the expertise of the cardiologist, and confidence that any actions taken by the cardiologist would result in the best care.”

12. On page 11 it sounds as though cardiologists value the patient voice in certain situations, but not when time is short,

We did not intent to imply that cardiologists do not value the patient voice when time is short, but instead were trying to explain that cardiologists stated it was more challenging to carry out the process of shared-decision making in urgent situations when decisions need to be made quickly. We have revised this sentence to better articulate this.

Results, Page 11:”They spoke of the possibility for delayed decision-making to increase the potential risk of adverse effects while the patient is trying to decide. Nonetheless, cardiologists described the importance of scaling information appropriately, giving patients the opportunity to ask questions, and proving sufficient time to digest information.”

13. On page 11, could another strength of the study be the inclusion of patient partners, the representative recruitment... You should give yourselves more credit.

Thanks for your comment. We have emphasized the inclusion of patient partners as a strength of the study.

	<p>Interpretation, Page 16: “Strengths of this study are the inclusion of patient partners, the perspectives of both patients and physicians, and representative recruitment that ensured we heard from patients without adverse events, as well as some who experienced kidney complications, including kidney failure requiring dialysis following invasive coronary procedures”.</p> <p>I thought this study added to both the science of SDM, and that of patient engagement Thank you.</p>
Reviewer 2	Dr. Maryam Madani Larijani
Institution	Department of Community Health and Epidemiology, University of Saskatchewan, Saskatoon, Sask.
General comments (author response in bold)	<p>The idea of this manuscript is good, as it seeks to support patient-physician communications through promoting shared-decision making. But the challenge with this manuscript is the lack of clarity around patient-oriented research. The literature review does little to increase the clarity about the shared decision making and decision support tools/decision aids.</p> <p>Here are some of my suggestions/comments.</p> <p>1. In the title, “Patient” and “people with chronic kidney disease” is repeating, it needs to be revised. While this may seem repetitive, we prefer to retain both terms in the title. The “patient” perspective is important to distinguish from “physician” perspective. “People with chronic kidney disease” are the specific population that our study focuses on. We think that the alternative title “Patient and physician perspectives on shared decision-making for coronary procedures in chronic kidney disease” is less patient-oriented.</p> <p>2. In the abstract, “We sought to explore the perceptions of patients and physicians about shared decision-making for heart procedures for patients with CKD”, please clarify whose perceptions are you exploring? The perceptions of patients for patients with CKD? This needs to be revised. We are exploring the perspectives of both patients and physicians about shared decision-making for heart procedures with specific focus on issues for people with CKD. We have changed the second use of the term “patient” to “people” to fit with the title. Abstract, Page 2: “We sought to explore the perceptions of patients and physicians about shared decision-making for heart procedures for people with CKD, as well as opinions about strategies and tools to improve these decisions.</p> <p>3. In the introduction, “As a result, treatment selection appears to be significantly different for patients with CKD when compared to other groups of high-risk patients, with a 20 to 50% lower likelihood for patients with CKD to receive invasive management for non-ST elevation acute coronary syndrome (ACS)(4, 5) when compared to similar patients without CKD”, this is good information, but the reader is struggling with parts of the sentence – seems not to flow well (the sentence needs revision). We have revised the sentence. Introduction, Page 5: “As a result, treatment selection is significantly</p>

different for patients with CKD when compared to other groups of high-risk patients. There is a 20 to 50% lower likelihood for patients with CKD to receive early (within 48 hours of admission) invasive management for non-ST elevation acute coronary syndrome (ACS)(4, 5) when compared to similar patients without CKD.”

4. In the introduction, author claims “It remains uncertain whether shared-decision making could be used to improve the decision quality and experiences of cardiac care for patients with CKD”, are there any references?

This sentence is a conclusive statement based on an absence of published evidence on this question based on our literature review. There is thus no reference per se to accompany the statement.

5. In the introduction, the authors need to say a bit more about the role of shared decision making in healthcare.

We have expanded the introductory material about shared decision-making. Introduction, Page 5-6: “Shared-decision making is an approach where clinicians and patients share best available evidence and work together to come to a decision informed by the physician’s expertise and the patient’s values and goals, needs and preferences, and risk tolerance (8, 9). Shared decision-making can result in treatment decisions that better reflect patients’ goals, increase patient and physician satisfaction, and improve outcomes (8,9). It remains uncertain whether shared-decision making could be used to improve the decision quality and experiences of cardiac care for patients with CKD.

6. In the setting section, please describe purposive sampling clearly with some citations.

We have further described the purposive sampling, with a citation.

Methods, Page 6: “Purposive sampling, a type of nonprobability sampling, was used for the recruitment from CKD clinics to intentionally select patients who had experienced acute kidney failure requiring dialysis following invasive coronary procedures for inclusion in the study (Reference - Lavrakas, P. J. (2008). Encyclopedia of survey research methods (Vols. 1-0). Thousand Oaks, CA: Sage Publications, Inc. doi: 10.4135/9781412963947).

7. In the source of data section, the authors need to say how the interview script is developed? Any feedback from patient advisory group/physicians?

We have added information on how the interview script was developed with input from stakeholders.

Methods, Page 7: “The interview guide was developed with input from patient partners, researchers, physicians (cardiologists and nephrologists) based on the Ottawa Hospital Research Institute (OHRI) needs assessment guidelines(11). Questions for patients explored reactions and decisions surrounding their cardiac care, including their perceptions regarding information provided to them at the time of the event, and their role in decision-making. Cardiologists answered questions about their approach to decision-making for ACS care of patients with CKD, and their own perceptions regarding practices, processes, and tools for shared decision-making.”

8. In the result section, “The patients were 42 to 83 years old and included 5 (25%) women and 1 caregiver”, Please clarify why one caregiver is categorized under patient participants.

One caregiver is included in our patient group because we consider caregivers within the overarching category of patients. This is consistent with the Canadian Institutes of Health Research Strategic Patient Oriented Research definition of patients as “individuals with personal experience of a health issue and informal caregivers, including family and friends” (<https://cihr-irsc.gc.ca/e/45851.html>).

9. In the result, “challenges to be addressed for future decision aid tool development”, first time talked about decision support tool. Please add some background information about decision support tool in the introduction with citations.

We have added some information explaining decision aids in the beginning of the interpretation.

Interpretation, Page 14: “Cardiologists indicated that processes developed to support shared decision-making in this setting need to allow for physician agency and clinical judgement, and that decision-aids (tools to support shared decision-making) need to address the individualization of patients in assessment of risks and consideration of patient values and preferences.”

10. In the data analysis section, while a minor detail, there seems to be some confusion about the terms peer debriefing and member checking and not quite described accurately. For example, member checking does not mean bringing back your analysis to your patient advisory group, but rather to the individuals from whom you collected the data.

We did not include member checking in the study and have not used this term in the manuscript. We have explained in the data analysis section how we included patient partners in the process of developing themes, their descriptors, and selection of representative quotes.

Methods, Patient Engagement, Page 8: “During the analysis, 2 patient partners (WP, CC) volunteered to comment on the findings to broaden the interpretation and credibility of the themes identified.....Methods, Data Analysis, Page 9: Themes, their descriptors, and representative quotes were reviewed with patient partners (WP, CC) to ensure that their own experiences were reflected in the data.”

11. In the conclusion section, the proposed next steps for future research are very vague. It would be helpful to include what the next steps are rather than solely “telling people what we learned”.

We have laid out important considerations and potential directions for future research under the subheading “Future Directions” in the “Interpretation” section.

Interpretation Page 16: “The findings of our study have implications for clinical practice of shared decision-making for ACS, and for future researchers and health policy makers on developing processes and tools to support shared decision-making in this context. Our findings suggest that strategies and tools for shared decision-making in this setting should be

	<p>tailored to patient uniqueness and variability in values and preferences, and incorporate physician agency and clinical judgement, which were perceived as important by both patients and physicians. Future strategies in this area could focus on developing decision-aids that provide individualized information about the risks of kidney and heart disease outcomes, and include information on the impact of these outcomes, such as need for temporary or permanent dialysis on quality of life. Given the important role that cardiologists play in guiding these decisions, physicians should be a target for training on the practice of shared-decision making and for using decision-aids with patients.”</p> <p>12. The whole paper needs a thorough revision in terms of grammatical points (e.g., page 3, line 19, there are two “in”). It is difficult to follow some long sentences (e.g., p. 2, line 18-19; p.3, line 31-38: p.4 line 12-22). I think this paper should be polished grammatically.</p> <p>We have corrected these items. The revised manuscript has been proofread and undergone significant revision prior to this resubmission.</p>
Reviewer 3	Dr. April Manuel
Institution	School of Nursing, Memorial University of Newfoundland, St. John's, NL
General comments (author response in bold)	<p>Thank you for this opportunity to review this article. This interesting paper holds potential to contribute to existing knowledge as to how patients and health care providers make shared decisions about their health and treatments. The complexity of shared- decision-making is inherent in the paper however; the data is presented in silo. That is, the perspectives of the patient and the cardiologist is not integrated as a collective whole- the hallmark of shared decision-making. The integration of patients as partners in research is a strength of this article. The paper reads well and is clear and concise. The purpose of the research is clearly-stated and methods are in align with qualitative descriptive research. Below are my comments:</p> <p>We have made revisions to the manuscript that attempt to better integrate the findings from patients and physicians. We have provided further details on these in response to specific numbered comments below.</p> <p>1. The abstract provides a good overview of the article I would suggest that the methods are clearly state rather than data was analyzed thematically (see line 19). We have explained the method of analysis in more detail in the abstract. Abstract, Methods, Page 2: “We partnered with 4 patients / caregivers with CKD or caregivers who partnered to inform the design and conduct of a qualitative descriptive semi-structured interview study, analyzed using content analysis.”</p> <p>2. Line 45 should be Results. Not interpretation? We agree. The sentence from line 45 has been incorporated with the “Results” section. Abstract, Interpretation, Page 2-3: “Processes and tools to facilitate shared decision-making for heart procedures for people with CKD require personalization, need to be time sensitive, and allow for incorporation of clinician judgement.”</p> <p>3. Lay Summary is well written but should clearly capture the themes.</p>

We have revised the Plain Language Summary to better capture the major themes.

Lay Summary, Page 3 “Patients and cardiologists both highlight the complexity of information exchange, including the impact of variability in knowledge seeking and understanding by patients when discussing risks and benefits of procedures. Patients identify trust in the physician as key to their confidence in decision-making. Cardiologists identify the importance of their role in guiding patients towards evidence-informed medical decisions based on their clinical assessment of risks as well as patient values and preferences.”

4. I agree that it is a strong correlation between the numbers of people with CKD who go onto develop heart disease. However, please provide some context as to the numbers of people in this population on a global, national and local level for the audience.

We have added information on the absolute rates of coronary death or nonfatal myocardial infarction citing 2 additional references, one from our province of Alberta, and a second from a global meta-analysis including other Canadian and international cohorts.

Introduction, Page 5: “The decision whether to pursue an invasive or medical approach to treatment for coronary disease may be particularly challenging for patients with chronic kidney disease (CKD) because although rates of coronary events exceed 10 per 1,000 person-years for people with CKD who are 50 years or older (high risk status), these procedures may lead to worsening kidney function or precipitate a need for dialysis, and there is less certainty about the potential for treatment benefits (1-5).

5. Methods: The overview of the methods specifically the approach is very brief. While Sandelowski’s article is often cited, it is more of an eclectic summary of suggestions as to how to do qualitative descriptive research rather than a good design article. I would integrate more appropriate sources to enrich this discussion of the methods. Refer to content analysis here as a key part of your methods.

We have expanded on the qualitative methods used and referred to content analysis. We have drawn from 2 additional sources, which have been added as citations to this section.

Methods, Data Analysis, Page 8-9: “Three research associates (JLF, PJ, TW) inductively analyzed each all 20 of the patient/caregiver and 10 cardiologist transcripts using conventional qualitative content analysis (12). Each research associate independently reviewed the transcripts word-by-word, highlighting the precise words that appeared to capture crucial concepts followed by making notes of the main impressions and thoughts to develop codes using NVivo software(13). The research associates then met with the principal investigator (MJ) on a monthly basis to discuss and reach consensus on emerging codes and grouping and to organize themes and create meaningful clusters.”

6. Need to explain patient –orientated research up front... You talk about the patient advisory council later however; the audience needs to be clear as to the rationale for involving patients particularly with respects to integrated knowledge

translation. Many people have difficulty with the term 'patient' so I would refer to CIHR definition of patient. On page 15, you mention this but it needs to be upfront. **We have added a sentence to define patient-oriented research at the start of the Patient Engagement Section. We have referred to the CIHR definition of Patient Oriented Research.**

Methods, Patient Engagement, Page 8: "Patient-oriented research engages patients as partners, focuses on patient-identified priorities, and aims to apply the knowledge generated to enhance healthcare systems and practices."

7. Page 6 Interview Questions: In the Appendix, you do not need to put the preamble to the questions...only the questions.

We have removed the introductory text and left only the list of questions.

8. Page 8 Lines 22-32. Here the authors talk about communicating the best available information. Was there any discussion of social supports and how it informed communication? Additionally, were there any barriers to communicating the information with this cohort that need to be considered such as education level etc.

We appreciate the interest in these questions; however, recognizing we did not specifically ask about these factors, neither the role of social support nor level of education were brought up by patients or physicians themselves. Both groups of participants discussed the complexity of communicating the risk information itself, as outlined in the text.

9. Page 8 Line 32 where does the " end starting with for patients to.....

We have added the closing quotation.

10. Page 8 Theme Variable Patient Knowledge. There are no supportive quotes to substantiate the written text. Need to develop more to capture the variation in experiences from no knowledge seeking...to a little..to a lot. How did cardiologist work through telling the patient enough information to ensure that informed consent was obtained? While I appreciated that, you have provided quotes in Table 3 they need to be embedded in the paragraph as evidence to support the discussion...this is routine in a good qualitative article. This is an easy fix.

We have provided 8 supportive quotes in Table 3 including 2 from patients describing satisfaction with the information provided and 3 from patients expressing a wish to have received more information. Table 3 also includes a quote from a physician describing the importance of framing information appropriately for each patient. Table 3 uses the same thematic headings as those provided as subheadings in the text of the manuscript. We understand the spirit of the suggestion to embed the quotes in the paragraph but found it challenging to do this while meeting word limits. We would be willing to address this change if directed accordingly by the Editors, ideally with an increase in the word limit for the manuscript.

11. Page 10 Line 26 "Cardiologists acknowledged the impact of patients needing more information and discussion time. They spoke of the possibility for delayed decision-making to increase the potential risk of adverse effects while trying to decide." This needs to be supported by quotes. How did the cardiologist address this in the spirit of shared decision-making and informed consent?

We have provided six supporting quotes related to this theme in Table 3. We have expanded within the text on how cardiologists addressed this challenge in the spirit of shared decision-making.

Results, Page 11: “Nonetheless, cardiologists described the importance of scaling information appropriately, giving patients the opportunity to ask questions, and proving sufficient time to digest information in this setting.”

12. Page 10 Line 36 “...Some described difficulty recalling how decisions had happened, and of the discussions they assume they had with the cardiologist.”

This is not a clear sentence. Need to flesh out a bit more as to the assumptions that the patients had and how this affected shared decision making. The authors often speak about the experiences of cardiologist and patients in silo when the crux of the paper is how they work together to decide on a plan of treatment etc.

We agree this was not well described. We have revised to better explain how patients and cardiologists were working together to make treatment decisions. Specifically we have further explained some patients’ experiences about how they perceived shared decision-making was occurring, particularly when they felt their care providers took a more important role in the decision-making process and they felt challenged to describe their role in the decision. We describe from the cardiologist perspective how they brought their knowledge and expertise to the decision-making process in these scenarios.

Results, Page 11: “Some patients perceived that decisions were primarily made by their care providers, but acknowledged they were still provided with information and explanations.”

13. Page 11 provided nudges in one direction or another would be a nice theme! I would provide a supportive example here of how this took place. What were some common nudges? Following a content analysis approach, one would expect some specific examples that were seen a lot in the transcripts.

We have included “Cardiologist recommendations and nudges” as one of our subthemes. We have added supportive examples to the text of how cardiologists reported providing nudges, in addition to the supportive quotes provided in Table 3.

Results, Page 11: “Cardiologists described providing “a recommendation as to which one I feel would be medically the most appropriate”, and in particular that “when you are at clear ends of the spectrum you tend to encourage”.

14. Page 11 line 26 the authors state that cardiologist identified they would like processes and tools in place to help with shared decision-making. What specific processes and tools did they state? This would be important for knowledge translation activities. There is not patient perspective noted here.

The discussions with cardiologists about processes and tools to support shared decision-making largely focused on decision aids and risk scores, which we have expanded on in our revision. Patients spoke more generally about providing more information on specific risks, which we described under the theme of “Variable patient knowledge seeking”, since this did not focus on specific processes and tools to support shared decision-making. We suspected more perspective from cardiologists than patients in this area

as physicians would have more familiarity with clinical risk scores and decision-aids and their role in clinical care than most patients would. **Results, Page 12: “Cardiologist emphasized potential value to improved processes and tools such as risk scores and decision aids to support shared decision-making. Importantly they felt these should address patient uniqueness, based on different risk factors for relevant outcomes, and to help support a shared understanding of patient values and preferences.”**

15. Page 12 the theme Need to Maintain Physician Agency to Apply Clinical Judgement does not have supportive quotes. Line 22 missing quotation marks for “whole”.

We have added some supportive quotes in the text and corrected the missing quotation mark.

Results, Page 13 “Cardiologists expressed caution against over reliance on tools. Cardiologists did not want “the decision completely taken out of their hands” and were concerned about the potential to depend on risk estimates and then not use their clinical judgement or “look at the patient as a whole”.

16. Page 12 Interpretation

17. Line 22 Some patients required additional information strategies...what are these not explored in article.

We found that the desire for additional information was expressed by some, but not all patients, and that physicians attempted a variety of strategies for communicating risk and benefit information in understandable ways to patients. However, we agree that additional formats for providing information were not explored in the study and so have removed this statement.

18. This section needs to be discussed more in detail with an integration of existing literature on shared decision making in clinical practice.

In the Interpretation section on pages 14 – 15 we discuss our study’s findings in relation to other literature on shared decision-making, with a particular focus on existing literature on shared decision-making in the setting of acute cardiovascular and urgent medical conditions. We found it difficult to include more discussion of existing literature on shared decision-making in clinical practice within the word limit of the manuscript, but would be willing to add more detail in a particular aspect of shared decision-making if felt necessary, ideally with an increase to the word limit for the article.

19. Page 13 Line 32 We found that cardiologists valued their patient’s voice when they were less certain about whether net benefits exceeded risk for their patients with... this is not fully captured in the findings. This interesting finding warrants more attention.

In the text of the results section on page 10 we wrote “Cardiologists were particularly open to patient input in situations of equipoise in the decision when “the patient’s voice becomes much louder” and cardiologists endorsed a greater dependence on their patient’s values and preferences.” We have provided an exemplar quote (physician 9) in Table 3 related to this

	<p>finding, under the theme of “Cardiologist recommendations and nudges”.</p> <p>20. Page 13 Line 42 Patients and physicians also emphasized the patient’s ability to synthesize relevant information within the short period for decision making in acute care as a potential challenge to shared decision-making. In order to make this statement you need to provide evidence of this in the findings. How did patients synthesize information? This is why the context is so important...what was the period from knowing one had heart disease to having to make a decision about treatment. This gets to the urgency of the intervention and how it influences the decision.</p> <p>We have provided patient and physician quotes in Table 3 related to this finding under the subthemes of “Challenges for patients to process information” and “Challenges with timeliness”, including the following; “The situation was an emergency. There wasn't a lot of time to make decisions you know. You don't have the option or the luxury or the benefit of having a lot of time to make different decisions.” (patient 14). We have clarified that the early invasive approach currently recommended for management of high risk with non-ST-elevation ACS involves intervention within 48 hours of hospital admission, and so in acute settings decisions are usually made within this timeframe.</p> <p>Introduction, Page 5: “There is a 20 to 50% lower likelihood for patients with CKD to receive early (within 48 hours of admission) invasive management for non-ST elevation acute coronary syndrome (ACS)(4, 5) when compared to similar patients without CKD.”</p> <p>21. Consider demographics in discussion of limitations.</p> <p>The majority of patient participants were men of older age, which is in-keeping with the broader population with CKD and ACS. We have added a sentence on this limitation.</p> <p>Interpretation, Page 16: “Third, patient participants were predominantly older men, so perspectives of women and younger patients with CKD may be underrepresented.”</p> <p>22. As I read the interview quotes, the authors could have enriched the discussion with more attention to the content of the quotes. For example, many participants spoke about the challenges of communication and receiving risk information including age, terminology, acuity of patient, timing of information, knowledge level regarding procedures. It was also evident that the meaning assigned to begin at risk was a factor. There is a lot of literature that speaks to the communication of risk that could be included.</p> <p>Thank you for this suggestion. We agree that highlighting these factors enriches the discussion and have revised the Interpretation to better capture the items identified by the reviewer from the quotes.</p> <p>Interpretation, Page 13: “This setting posed challenges for physicians in how they communicated risk information and for patients both in their ability to process information under duress of illness, understand terminology regarding procedures, and to understand complexities surrounding the meaning of being at risk.”</p>
Reviewer 4	Dr. Francesca Brundisini
Institution	Faculté des sciences de l’administration, Université Laval, Québec, Que.

General comments
(author response in
bold)

Thank you for the opportunity of reviewing this interesting qualitative work on patient and physician perspectives on shared decision-making for coronary procedures in people with chronic kidney disease. The authors did well to empirically explore patients with CKD and cardiologists' experiences and perspectives about shared decision-making for heart procedures and filling the current gap in knowledge and practice. The manuscript is very well-written and nicely organized with clear headers and nice use of tables. The manuscript fulfills most of the items listed in the COREQ checklist (as required by CMAJ Open), addressing the most important items, including the research team, study design analysis and findings domains. I have some minor comments and suggestions for improvement for authors to consider.

Abstract

1. The authors should consider reporting the analytical method used (content analysis) rather than describing it as thematically analyzing data.

We have revised as suggested.

Abstract Page: "We partnered with 4 patients / caregivers with CKD to inform the design and conduct of a qualitative descriptive semi-structured interview study, analyzed using content analysis."

Lay summary

2. Consider switching from passive to active voice as it makes it easier for those for who comprehend text at a lower reading level to better understand the summary.

We have revised the lay summary using active voice.

Introduction

No comments.

Methods

3. The authors did an excellent job describing the study design (qualitative descriptive approach) and the specific analytical technique (content analysis). The authors, however, should explain why they selected this research design based on their study objective. Why only descriptive and not a more interpretative approach?

The main objective of our study was to describe the perceptions of both patients and physicians about challenges to shared decision-making in ACS care for patients with CKD. A 'descriptive approach' to this research was felt most appropriate to illuminate poorly understood aspects of experiences, rather than an 'interpretive approach', which would have been appropriate if we were seeking to examine specific contextual features of the experience in relation to other influences, which was not our primary objective. We have revised the start of the methods section to frame the relationship between the study objective and its design in the methods.

Methods, Page 6: "In order to illuminate poorly understood aspects of experiences, we used qualitative descriptive methods (10) to conduct and analyze individual, semi-structured interviews with patients with CKD who had recently experienced a non-ST elevation ACS, as well as individual semi-structured interviews with cardiologists experienced in ACS care."

4. Settings:

a. This section is thorough and well done. The authors should consider adding that

purposive sampling was also used for physicians for the selection of cardiologists (and not any other type of physician).

We have made this addition as suggested.

Methods, Page 7: “Cardiologists from Alberta with expertise in the management of ACS were identified purposively from the Cardiac Catheterization Lab at Foothills Medical Centre, Calgary, and invited via email to participate in an individual, semi-structured interview.”

Sources of data:

a. The data collection procedure and description of the questions used in the interview guide were detailed and well documented. However, it would be helpful if the authors would clarify how they reached saturation (and thus whether data collection and analysis were iterative; if that was the case, the authors should consider adding that the data collection and analysis were iterative and that data analysis informed data saturation when no new concepts(?) or descriptive themes emerged).

We have revised as suggested.

Methods, Page 8: “The data collection and analysis were iterative and data analysis informed data saturation when no new descriptive themes emerged. Patient and cardiologist interviews ceased when saturation was achieved.”

6. Patient engagement

a. The authors carefully engaged patients at several stages of the research process (from study design, preparation of study information material for patients, interview guide, analysis, and dissemination plan). However, it would be helpful if the authors could describe how these patients partners contributed to the research activities, through regular team or individual meetings, providing feedback and reviews of the study plans and materials? Other?

We have expanded on how patient partners contributed to the research activities.

Methods, Patient Engagement, Page 8: “Our study was supported by 4 patients / 1 caregiver with CKD who met with other members of the research team on a recurring basis for the duration of the study and provided input to the programme of research. Patients partnered with us to inform the design of the study, the study information material for patients, as well as the interview questions for patients. During the analysis, 2 patient partners (WP, CC) also commented on the findings to broaden the interpretation and credibility of the themes identified. They also contributed to the dissemination plan including coauthoring the manuscript and, presenting at conferences.”

7. Data analysis:

a. The authors report the analytical technique adopted in this study (conventional content analysis). However, the authors should consider adding a line or two explaining the analytical process (eg. word-by-word only at the beginning or throughout all the transcripts). The authors should consider describing the process in stages (first coding stage aimed at building a code-book) and the second stage using the code-book (and did the authors continue word-by-word analysis at this stage, or line-by-line or indent-by-indent?)

We have added a description of these details as suggested.

Methods, Data Analysis, Page 8-9: " Each research associate independently reviewed the transcripts word-by-word, highlighting the precise words that appeared to capture crucial concepts followed by making notes of the main impressions and thoughts to develop codes using NVivo software(13). The research associates then met with the principal investigator (MJ) on a recurring basis to discuss and reach consensus on emerging codes and grouping and to organize themes and create meaningful clusters. Research associates met after coding the first five transcripts to finalize the coding scheme, and the agreed upon codes and themes were systematically applied to all subsequent transcripts (14, 15)."

b. The authors describe a meeting to discuss and finalize the emerging codes and themes. Was this one meeting? Or several meetings are done over time? If yes, how often? And always with all the authors, or not?

We held several meetings over time with the research team, although not every author was present for every meeting based on their availability. We have added mention of multiple meetings over time for this purpose in the methods section.

Methods Page 9: "The research associates then met with the principal investigator (MJ) on a monthly basis to discuss and reach consensus on emerging codes and grouping and to organize themes and create meaningful clusters."

c. The methods section does not report any reflexivity considerations. The authors should consider adding reflexivity for each author and their relationship to the topic and the participants recruited in the study.

We have added reflexivity considerations for all authors in the COREQ checklist added to the supplementary material.

Results

8. The authors should settle on the terminology for the term "shared decision-making". They mostly use "shared decision-making" but on page 9, line 15 they refer to it using the acronym "SDM". The authors should consider picking one term and be consistent with the terminology across the manuscript.

We agree and have revised based on the suggestion by removing the use of the abbreviation SDM from the text.

9. It would be helpful if the authors could add a small paragraph illustrating the overall two identified themes (Complexity of Bidirectional Information Exchange in Practice, and Processes and Tools to Support Shared Decision-Making) and specify how the first theme emerged from both patients' and cardiologists' perspectives, whereas the second theme was specific to cardiologists only.

Thank you for this suggestion. We have revised as you have suggested to highlight the first theme emerged from integration of both patient and cardiologist perspectives, whereas the second theme arose from cardiologists' perspectives.

Results, Page 9: "An overarching theme related to the complexity of bidirectional information exchange in practice emerged from both patients' and cardiologists' perceptions, whereas a second overarching theme about processes and tools needed to support shared decision making arose from

cardiologists' perspectives only.”

Interpretation

10. The authors should consider explaining for whom these findings are most relevant (i.e. health policymakers, researchers, physicians, patients?)

We have revised as follows:

Interpretation, Page 15: “The findings of our study have implications for clinical practice of shared decision-making for ACS, and for future researchers and health policymakers interested in developing processes and tools to support shared decision-making in this context.”

11. In the patient-oriented paragraph of the interpretation section (page 14, starting at line 8) the authors did explain how patient partners' role contributed to the research process and findings. However, while the authors described in the methods section how these partners contributed also to the dissemination plan of the research findings, it would be helpful to know whether these plans have been carried out, how, and what role patients had in such plans. Consider adding a small paragraph on how the findings have been (or are being) disseminated and exchanged across settings and audiences.

Thank you for this suggestion. We have added information about the role our patient partners have played in knowledge dissemination through participation in presenting project findings at the CanSOLVE CKD CIHR SPOR Chronic Disease Network.

Interpretation, Page 16: “Patient partners have also played an active role in dissemination of our findings to other researchers and health policymakers attending an annual CKD meeting.”

Tables

The authors added the GRIPP2 reporting checklist for the patient and public involvement in research, but it is never mentioned in the text. Please indicate that you have used this checklist (in the Patient engagement paragraph in the methods section perhaps?).

We have added:

Methods, Page 6: “We followed the GRIPP2 and COREQ checklists (Supplementary Material) for reporting.”

Abbreviations

12. Page 25 : Consider adding ACS (acute coronary syndrome).

We have added ACS to the list of abbreviations.

Erin Russell Reviews from CMAJ

1. Abstract: Please move participant numbers from Methods to Results.

Done.

2. Intro: Please provide a reference to support the first sentence.

A supporting reference has been added.

3. Please rename Setting subsection Setting and Participants.

Done.

4. Please include the study dates in the description of the study Setting.
Done.

Methods, Page 6: "Patients were recruited from March - Sept 2018 from across Southern Alberta using the cardiac registry of the Alberta Provincial Project for Outcomes Assessment in Coronary Heart disease (APPROACH), and from a tertiary referral hospital (Foothills Medical Centre) and nephrology clinic (Sheldon Chumir Health Centre) in Calgary, Alberta."

5. Patient engagement: "2 members of the patient advisory group (WP, CC) commented on the findings and themes and contributed to the dissemination plan including coauthoring the manuscript" Please describe this process in more detail.

- How were these two members selected from the patient advisory group?
These two members volunteered to participate in the analysis and dissemination steps when we invited patient partners to be involved in these steps.

- Were their comments incorporated into the manuscript?
Yes

- How did they contribute to the dissemination plan?
By providing critical input and revisions to the manuscript as coauthors and by participating in the presentation of study findings at the Can-SOLVE CKD Strategic Patient Oriented Research Network Annual Meeting.

We have provided more detail that address these 3 questions and explain further how these 2 members of our patient advisory group participated throughout all the phases of the study.

Methods, Page 8: "During the analysis, 2 patient partners (WP, CC) volunteered to comment on the findings to broaden the interpretation and credibility of the themes identified. Their perspectives were incorporated into interpretation of findings and they also contributed to the dissemination plan including coauthoring the manuscript and presenting at the Can-SOLVE CKD annual meeting (www.cansolveckd.ca)."

6. Results are presented separately for patients and cardiologists. We felt that you may have missed an opportunity to integrate/triangulate the findings from the two groups.

This was our intent in presenting findings from both patients and cardiologists in the same manuscript. We have attempted to better integrate the findings from patients and physicians throughout the text of our revised. Please see our specific responses to Reviewer 3 comment #12 and Reviewer 4 comment # 9.

7. Interpretation: Please include the following 5 main categories: main findings (discuss implications; do not repeat results); comparison with other studies; future directions; limitations; and conclusions (include implications for practice).

We have revised the Interpretation section under these 5 main subheadings.

8. More discussion of what the data mean (as opposed to simply what the data say) is warranted.

We have revised the “Main Findings” and “Future Directions” subsections of the Interpretation to provide more discussion of the meaning our findings.

9. Please ensure your final word count is below 3000 words.

The word count of our revised manuscript is 3000 words.

10. Please include a completed COREQ checklist. For more information, see the Equator Network (www.equator-network.org/)

We have added a COREQ checklist.