PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	What Factors Contribute To Uncontrolled Gout And Hospital Admission: A Qualitative Study Of Inpatients And Their Primary Care Practitioners
AUTHORS	Kong, Darren; Sturgiss, Elizabeth; Dorai Raj, Annamma; Fallon, Kieran

VERSION 1 – REVIEW

REVIEWER	Peter Gow Rheumatology Department Middlemore Hospital Auckland New Zealand
REVIEW RETURNED	25-Aug-2019

GENERAL COMMENTS	The paper gives a clear outline of the patient, community and general practice issues surrounding the suboptimal management of gout. It would have been interesting to have had information on whether the he survey to the GP's was structured, or open, and whether there were questions about whether the GP was aware of their lack of knowledge, where they received their information, and whether they wished to know more Encouragingly, the chronic care management approach which they encourage people to use has been successfully trialled in Northland NZ with results significantly better than the national rates (Lawrence A, Scott S, Fabio S et al Facilitating equitable prevention and management of gout for Maori in Northland, New Zealand, through a collaborative primary care approach. Journal of Primary Care 2019 11 (2)117-127)

REVIEWER	Amy Nguyen Australian Institute of Health Innovation, Macquarie University, Australia
REVIEW RETURNED	03-Sep-2019

GENERAL COMMENTS	Authors interviewed hospital inpatients with gout, and their GPs, regarding gout and it's impacts. The study found that patients had little knowledge of gout, experienced stigma around having gout and did not have continuity of care for their gout. These all impacted on suboptimal gout management. 1. “Stigmatisation and gout not considered important” can be misread as stigmatisation is not considered important. 2. Were patients and GPs reimbursed for their participation? 3. Do authors have suggestions to improve continuity of care in gout

	patients? 4. The first parts of the Discussion focus a lot on how this study presents similar findings to other studies. Authors should instead focus more on what changes in gout management should occur in future e.g. what can be done about stigma, poor gout knowledge, etc. Perhaps there is a larger role for pharmacists if they have stated that that is where they get information? Authors could also focus on any differences this study presents, particularly to the study by Vaccher et al where patients and GPs were also interviewed and of which this study is based. 5. Smartphone apps are being designed for and used by gout patients and can be mentioned as a form of patient self-management support. 6. More information about what the Chronic Care Model involves with an example of a similar condition is required to see how that could be a suitable way forward for gout treatment. 7. Authors do not present limitations of the study e.g. not using validated measures to assess a patient’s gout knowledge could be listed as limitation.

REVIEWER	Felix Holzinger Charité Universitätsmedizin Berlin Institute of General Practice Berlin, Germany
REVIEW RETURNED	10-Sep-2019

GENERAL COMMENTS	Thank you for the opportunity to review this interesting paper. Here are my remarks: Methods: - For the interview guide / framework, you cite a similar study in primary care (citation No 33), but this paper does not provide many details on for example phrasing of questions, degree of openness etc. The authors of this cited paper state that their guide is available on request, but the general reader of your paper will probably not go to the length of requesting this, just to gain an impression. Please provide at least some samples / excerpts of your interview guides (patients, GPs) to make it clearer what and how you asked. - As to your analysis, you refer to a work describing thematic analysis from a grounded theory approach. How does this grounded theory approach reflect in your work or analysis? From the results and discussion section, it is not easy to see how what you did is different from e.g. content analysis, and why you chose a certain method over another. - You claim content saturation after just 11 interviews, which may (although the interview sample is still small) be true for patient interviews, but certainly not for GPs… why did you not include more patient-GP pairs when faced with the high rate of GP participation decliners? I would suggest at least expanding the critical discussion of the issue of saturation in the limitations section, due to the small sample size. - Please explain your analysis in further detail. You distinguished between patient/community/health-system/practitioner factors, but is this framework the result of an inductive process - or (partly) deductive, or based on the interview guideline? Please provide some examples for coding. Results - Two patients were not admitted for gout but for other issues (infarction, infection), which may seem somewhat discrepant to your

	abstract, where you state "…admitted with gout…". If your aim was to show why gout patients end up in inpatient care, why did you decide to include such participants admitted for other causes, for which it seems very clear why they need inpatient care (with no alternative), e.g. the myocardial infarction patient? Are these cases (patient 1 and 2) in fact fit to represent the population of interest? I also feel that sampling needs to be described in more detail, was this a consecutive/convenience sample (as it seems) or was it purposive in any way? - Patients in the sample are very multi-morbid and some are quite old… it may seem not very surprising that some may consider their gout a minor and –compared to their other abundant health issues- less important health problem. As a patient, I think I would feel so too, if I had just suffered for example a myocardial infarction, or if I was suffering from potentially life-threatening and severe chronic issues like COPD and ischaemic heart disease. So this appraisal by the patient may not be a "trivialization" of the condition, as you call it in your later discussion. You should discuss this issue of patients other morbidities. This is also important when talking about the management of gout, as in some instances the hospitalization may not be the result of some kind of mismanagement in primary care, but of very complex patients with e.g. geriatric care situations. Some patients may be admitted "for gout", but the GP actually may have had difficulties to manage their situation because of their other issues or combination thereof, and not because she or he does not know how to treat gout… - In the section "Suboptimal management/health practitioner factors" (page 16) you state: "…inappropriate prescribing were apparent", but this impression stems largely from patient accounts, the GP perspective is missing here. Did the few GP interviews you conducted also hint strongly at inadequate care? There may also be selection bias: these patients selected in hospital may represent a more volatile, mobile and more GP-aversive population compared to the usual community-dwelling gout sufferer. Discussion - You state that treatment of gout patients in line with best chronic care conditions could possible prevent admissions. This seems plausible from a theoretical point of view, but it seems that this is not a result of your study, which could be made clearer. There again, we face the issues of selection and sampling: if you sample inpatients of any health condition, you are always prone to encounter a few who are badly manageable in primary care (otherwise, they would not be in hospital…). It seems difficult to conclude from these encounters that that there is a general care deficit concerning a condition. - You are of the opinion that gout is an under-recognized and sub-optimally managed chronic condition, but this seems not directly derivable from your qualitative results. As mentioned, a selection bias in the direction of "problem patients" may apply when recruiting in a tertiary setting; this may not reflect the general care reality in primary care settings. These issues would need to be discussed in my view. I hope my comments may be useful in further improving your manuscript.

VERSION 1 – AUTHOR RESPONSE

Reviewer	Comments	Responses	Changes made to manuscript

1	A	The paper gives a clear outline of the patient, community and general practice issues surrounding the suboptimal management of gout. It would have been interesting to have had information on whether the he survey to the GP's was structured, or open, and whether there were questions about whether the GP was aware of their lack of knowledge, where they received their information, and whether they wished to know more	Thank you for your comments. A semi-structured interview for both patients and GPs were performed where we had a list of pre-determined questions which were asked initially, but if further elaboration is required from the interviewee, open questions may then be asked to clarify certain points. There were no GP knowledge-specific questions asked as this study was not designed to test the GPs' knowledge on gout but rather to primarily elucidate their aims and challenges/barriers in managing their patients' gout.	Added patient and GP interview guides as Appendices (Supplementary data).
	B	Encouragingly, the chronic care management approach which they encourage people to use has been successfully trialled in Northland NZ with results significantly better than the national rates	It is quite reassuring then that a chronic care management approach trial in New Zealand shows positive outcomes as this may prompt the wider medical community to consider a similar approach to improve these patients' health outcomes. We have incorporated this paper into the writing of our manuscript.	Following comment added to Discussion (new paragraph 7): "More recently, a chronic care management programme in New Zealand targeting patients from high-needs socioeconomic backgrounds with gout showed better patient outcomes compared to the national average. The programme involved a collaborative effort between community pharmacists, GPs, specialist physicians, nurse practitioners, and gout educators, with roles including prescribing and dispensing medications; maintaining regular contact with patients; advising patients to have blood tests and then monitoring the results on a shared information system; providing patient support and improving health literacy; and acting as a liaison between patient and healthcare teams. The programme demonstrated a framework which is characteristic of the Chronic Care Model where an empowered patient with inter-provider collaboration and support improved patient outcomes.". See page 25.

2	A	Authors interviewed hospital inpatients with gout, and their GPs, regarding gout and it's impacts. The study found that patients had little knowledge of gout, experienced stigma around having gout and did not have continuity of care for their gout. These all impacted on suboptimal gout management.	Thank you for your comments.	No changes made.
	B	"Stigmatisation and gout not considered important" can be misread as stigmatisation is not considered important.	We have amended the sentence to read as "Gout not considered important and stigmatisation of gout" to avoid confusion.	Changes made as described on page 12.
	C	Were patients and GPs reimbursed for their participation?	Patients and GPs received no reimbursement for their participation.	Comment "Neither patients nor GPs were reimbursed for their participation" added to Methods under Recruitment and data collection (subheading Health practitioner). See page 8.
	D	Do authors have suggestions to improve continuity of care in gout patients?	This paper has raised this issue in gout management – we did not explore how this could be implemented. This could be the focus of future research.	No changes made.
	E	The first parts of the Discussion focus a lot on how this study presents similar findings to other studies. Authors should instead focus more on what changes in gout management should occur in future e.g. what can be done about stigma, poor gout knowledge, etc. Perhaps there is a larger role for pharmacists if they have stated that that is where they get information? Authors could also focus on any differences this study presents, particularly to the study by Vaccher et al where patients and GPs were also interviewed and of which this study is based.	Thank you for this suggestion. We believe that discussing and demonstrating similar findings to other studies, especially those performed in other Australian states or overseas, are important as it shows that these issues are universal and have remained persistent over the years. It is beyond the scope of this paper to make specific recommendations on future management as we did not ask the patients or GPs about the subjects in significant detail. This research was conducted using a semi-structured interview where we had a list of pre-determined questions which were asked initially, but if further elaboration is required from the interviewee, open questions may then be asked	No changes made. Original manuscript already implied that future research should focus on changes that could be made to gout management to improve patient outcomes (paragraph 9 of Discussion). See page 26.

			to clarify certain points. It could certainly be the focus of a future study.	
	F	Smartphone apps are being designed for and used by gout patients and can be mentioned as a form of patient self-management support.	Thank you for this suggestion. We believe that this would be beyond the scope of this paper – we did not ask the patients about if they would like to use an app. The specific methods for improving self-management in complex patients with gout are a study in itself. It could certainly be the included in a future study.	No changes made. Original manuscript already implied that future research should focus on the best way to implement the Chronic Care Model including exploring how patients could be supported to improve self-management (paragraph 9 of Discussion). See page 26.
	G	More information about what the Chronic Care Model involves with an example of a similar condition is required to see how that could be a suitable way forward for gout treatment.	Thank you for this comment. We have added additional information on the Chronic Care Model. We have also added an example of how a chronic care programme for gout has resulted in improved patient outcomes.	Following comment added to Introduction (paragraph 3): “This includes a variety of components such as healthcare team building exercises; regular health provider meetings and feedback sessions; maintaining good electronic records or registries which are readily accessible; educating health providers; developing and distributing guidelines or protocols; setting up electronic alerts or reminders to physicians and patients with regards to follow-up visits, scheduled appointments or meetings; educating patients and formulating self-management or care plans; and involving specialists or experts and community clinicians in patient care.”. See page 4. Following comment added to Discussion (new paragraph 7): “More recently, a chronic care management programme in New Zealand targeting patients from high-needs socioeconomic backgrounds with gout showed better patient outcomes compared to the national average. The programme involved a collaborative effort between community pharmacists, GPs, specialist physicians,

				nurse practitioners, and gout educators, with roles including prescribing and dispensing medications; maintaining regular contact with patients; advising patients to have blood tests and then monitoring the results on a shared information system; providing patient support and improving health literacy; and acting as a liaison between patient and healthcare teams. The programme demonstrated a framework which is characteristic of the Chronic Care Model where an empowered patient with inter-provider collaboration and support improved patient outcomes.”. See page 25.
	H	Authors do not present limitations of the study e.g. not using validated measures to assess a patient’s gout knowledge could be listed as limitation.	Our study did not seek to formally measure the patient’s understanding of gout. We did ask questions about it and used a qualitative method for unpacking this. We do not think that a formal measure of the patient’s knowledge of gout would have added to our understanding – and it may have reduced our ability to build rapport with the patients for the interview. Thank you for the suggestion but we do not agree that this type of data would have added to our understanding of the patient experience.	No changes made.
3	A	For the interview guide / framework, you cite a similar study in primary care (citation No 33), but this paper does not provide many details on for example phrasing of questions, degree of openness etc. The authors of this cited paper state that their guide is available on request, but the general reader of your paper will probably not go to the length of requesting this, just to gain an impression. Please provide at least some samples / excerpts	Thank you for your comments. Patient and GP interview guides has been added as Appendices.	Added patient and GP interview guides as Appendices (Supplementary data).

		of your interview guides (patients, GPs) to make it clearer what and how you asked.		
	B	As to your analysis, you refer to a work describing thematic analysis from a grounded theory approach. How does this grounded theory approach reflect in your work or analysis? From the results and discussion section, it is not easy to see how what you did is different from e.g. content analysis, and why you chose a certain method over another.	Thank you for this comment. We believe this misunderstanding has happened from a mistaken citation – we have now directly cited thematic analysis (rather than the grounded theory paper that we mistakenly cited). We agree that our method is a thematic analysis, not a grounded theory study. We apologise for this mistake in our citations.	Original citation of “Chapman A, Hadfield M, Chapman C. Qualitative research in healthcare: an introduction to grounded theory using thematic analysis. J R Coll Physicians Edinb [Internet] . 2015;45(3):201–5.” replaced with new citation “Nowell LS, Norris JM, White DE, Moules NJ. Thematic Analysis: Striving to Meet the Trustworthiness Criteria. Int J Qual Methods. 2017;16(1):1–13.”. See Reference 34 listed on page 32.
	C	You claim content saturation after just 11 interviews, which may (although the interview sample is still small) be true for patient interviews, but certainly not for GPs… why did you not include more patient-GP pairs when faced with the high rate of GP participation decliners? I would suggest at least expanding the critical discussion of the issue of saturation in the limitations section, due to the small sample size.	The recruitment for this study commenced with patients who were in hospital with uncontrolled gout, so patients were the primary data source. We continued to recruit patients until patient data reached saturation. We have amended the manuscript accordingly to avoid confusion.	Methods amended to reflect patient data saturation only and not the GPs’ (under Data analysis) to read the following: “The interviews ceased when no new themes were generated from further patient interviews and a strong thematic understanding had developed”. See page 8.
	D	Please explain your analysis in further detail. You distinguished between patient/community/health-system/practitioner factors, but is this framework the result of an inductive process - or (partly) deductive, or based on the interview guideline? Please provide some examples for coding.	We did not have any pre-determined frameworks prior to data collection and theories/hypotheses were developed from the data itself. Data collection and analysis (coding and generating themes) were being conducted concurrently, and as we continued along with further interviews, it added further to our understanding of the participants’ insights until we reached patient data saturation. The results and discussion are based on the themes generated. We chose this approach as it allowed us to generate themes from the insights of the participants,	We have clarified our coding method in the manuscript in Methods (under Data analysis): “We used thematic analysis to examine the data for common concepts or repeated patterns and then grouped these into categories for discussion. DK and ES coded the interviews using an inductive process and discussed the data on three occasions. Once we had completed the inductive coding process, we saw the similarities between our themes and the Chronic Care Model,

			rather than fitting it into pre-existing frameworks. Once we finished this inductive coding, we saw the similarities with the Chronic Care Model. We then decided to think about how the themes related to different levels of the healthcare system – it was at that point that we divided the themes into patient, clinician and system factors. We felt this approach helped to emphasise the different barriers within the healthcare system processes.	particularly the different levels of the healthcare system that were influencing patient care. We developed a coding matrix to organise themes into the following influencing factors: patient, health practitioner, patient-health practitioner, health system, community. The themes and concepts were presented to ADR and KF for comment. The interviews ceased when no new themes were generated from further patient interviews and a strong thematic understanding had developed.” See page 8.
	E	Two patients were not admitted for gout but for other issues (infarction, infection), which may seem somewhat discrepant to your abstract, where you state “…admitted with gout…”. If your aim was to show why gout patients end up in inpatient care, why did you decide to include such participants admitted for other causes, for which it seems very clear why they need inpatient care (with no alternative), e.g. the myocardial infarction patient? Are these cases (patient 1 and 2) in fact fit to represent the population of interest?	Thank you for this comment on the sampling strategy. We included all patients admitted under the Rheumatology service with gout in addition to those that were admitted for other reasons but also had uncontrolled gout. We agree with your assessment that these patients may have a different approach and experience of gout. In the patient data, these patient interviews raised similar issues to the patients admitted for gout. We have added this to the limitations section.	Added additional comment “Some patients were admitted primarily for reason(s) other than gout and there may have been differences in these patients’ experience of gout that were not uncovered” under Strengths and limitations of this study. See page 3.
	F	I also feel that sampling needs to be described in more detail, was this a consecutive/convenience sample (as it seems) or was it purposive in any way?	The Rheumatology service in the hospital where patients were recruited provided the patient samples where the patients were either directly under their care or that the patients were under another specialist service’s care, but the Rheumatology service were consulted for advice on managing gout.	Added additional comment “The Rheumatology service provided the patient samples based on the eligibility criteria described in Table 1” under Methods under Recruitment and data collection (subheading Patient). See page 6.
	G	Patients in the sample are very multi-morbid and some are quite old… it may seem not very surprising that some may consider their gout a minor	Thank you for this comment. ‘Trivialisation’ may have been too strong a word and we did not mean to say that patients did not care about gout but that they were	Last sentence of paragraph 4 under Discussion amended with the following comment: “These themes were also shown in our study when

		and –compared to their other abundant health issues- less important health problem. As a patient, I think I would feel so too, if I had just suffered for example a myocardial infarction, or if I was suffering from potentially life-threatening and severe chronic issues like COPD and ischaemic heart disease. So this appraisal by the patient may not be a “trivialization” of the condition, as you call it in your later discussion. You should discuss this issue of patients other morbidities. This is also important when talking about the management of gout, as in some instances the hospitalization may not be the result of some kind of mismanagement in primary care, but of very complex patients with e.g. geriatric care situations. Some patients may be admitted “for gout”, but the GP actually may have had difficulties to manage their situation because of their other issues or combination thereof, and not because she or he does not know how to treat gout…	less concerned about it in the context of their other diseases which they may consider more important as you rightly stated. Although some other studies demonstrated suboptimal care of gout by GPs through other methods, we cannot confirm this in our study and the study was also not intended to imply that poor care was provided throughout primary care. We agree that patients with multimorbidity may have caused difficulties for their GPs in managing their gout. This can be seen by where GP1 had challenges in differentiating gout from osteomyelitis in a complex multimorbid patient resulting in delayed treatment.	patients considered gout to be unremarkable compared to their other health conditions.” See page 24. Comment added to last sentence of paragraph 5 under Discussion: “However, this could also reflect the difficulties faced by primary care health practitioners in managing gout in complex multimorbid patients, such as a majority of those seen in our study, and that hospitalisation with appropriate specialist services may be an optimal setting to manage such patients rather than an actual deficiency in providing care.” See page 24-25.
	H	In the section “Suboptimal management/health practitioner factors” (page 16) you state: “…inappropriate prescribing were apparent” , but this impression stems largely from patient accounts, the GP perspective is missing here. Did the few GP interviews you conducted also hint strongly at inadequate care? There may also be selection bias: these patients selected in hospital may represent a more volatile, mobile and more GP-aversive population compared to the usual	Thank you for this comment. We agree that this is a limitation of our study and have included this in the limitation section (that the medical management was from patient report and not from the GPs or records). We also agree that these patients are potentially the most complex and difficult to treat and we hope that this reflected in our discussion of chronic care in patients with complex multi-morbidity.	No changes made.

		community-dwelling gout sufferer.		
	I	You state that treatment of gout patients in line with best chronic care conditions could possible prevent admissions. This seems plausible from a theoretical point of view, but it seems that this is not a result of your study, which could be made clearer. There again, we face the issues of selection and sampling: if you sample inpatients of any health condition, you are always prone to encounter a few who are badly manageable in primary care (otherwise, they would not be in hospital…). It seems difficult to conclude from these encounters that that there is a general care deficit concerning a condition.	Thank you for this comment. Yes, we agree with your concern that this patient group represents for complexity for many reasons and are not simply a reflection of primary care mismanagement. This study is focused on patients admitted with gout – a potentially preventable admission – and how we might improve care in the community. The data from this study that point to a need for a shift to chronic disease management for gout including the difficulties with continuity of care, suboptimal management, and poor understanding of disease and the disease misconceptions. It could be considered that these patients represent the "tip of the iceberg" and are the most complex, and difficult to treat with gout. We did not intend to imply that gout is poorly managed throughout primary care and we agree that in most cases of gout this is not the case. However, our attention to these complex cases reveal learnings that can be applied more generally to gout care – most importantly that the condition should not be thought of, and taught as, an acute condition, but as a chronic condition.	Comment added to last sentence of paragraph 5 under Discussion: "However, this could also reflect the difficulties faced by primary care health practitioners in managing gout in complex multimorbid patients, such as a majority of those seen in our study, and that hospitalisation with appropriate specialist services may be an optimal setting to manage such patients rather than an actual deficiency in providing care." See page 24-25.
	J	You are of the opinion that gout is an under-recognized and sub-optimally managed chronic condition, but this seems not directly derivable from your qualitative results. As mentioned, a selection bias in the direction of "problem patients" may apply when recruiting in a tertiary setting; this may not reflect the general care reality in primary care settings. These issues would need to be discussed in my view.	The under-recognition and suboptimal care of gout is based on both Australian and overseas studies as described in references 3, 6, 7-22, 36-40. This background is what has informed our study to explore why people might be admitted with gout. We agree that their admission is not primarily a "failure of primary care" and hope that our suggestion of applying the Chronic Care Model would instead be seen as a systematic approach to improving the care of these complex patients.	No changes made.

VERSION 2 – REVIEW

REVIEWER	Amy Nguyen Australian Institute of Health Innovation, Macquarie University, Australia
REVIEW RETURNED	30-Oct-2019

GENERAL COMMENTS	There is no limitations section included in this manuscript (only summary points at the beginning). I still feel that a limitation section should be included in the Discussion. Reviewer 3 also noted the same. I am satisfied with the responses to Reviewer comments otherwise.

REVIEWER	Felix Holzinger Charité - Universitätsmedizin Berlin, Institute of General practice, Germany
REVIEW RETURNED	07-Nov-2019

GENERAL COMMENTS	Thank you for the opportunity to review your revised manuscript, which has considerably improved in my view. I have two remaining concerns / sugggestions: In your reply to my questions about sampling (Question F), you explain that the patients were recruited in the rheumatiology department/service. I do not think that this is an adequately precise description, as it does not explain how they recruited the participants. In my view, you schould clearly express that this is in fact a convenience sample and not in any way a purposive one (as I understand it). Secondly, I want to thank you for your detailed explaination of your views in regard to patient complexity and primary care, e.g. in response to question I. I would suggest to include some of the explainatory passages of your reply in your discussion or adapt these passages to that end, for they explain your views on these issues far better than your revised manuscript does. The limitations in regard to conclusions about the care landscape due to selective sampling in a tertiary care setting should also be mentioned and discussed in limitations.

VERSION 2 – AUTHOR RESPONSE

Reviewer 2:
-Comment: There is no limitations section included in this manuscript (only summary points at the beginning). I still feel that a limitation section should be included in the Discussion.
-Our response: Thank you for your comment. We have created a strengths and limitations section at the end of the discussion section.
-Changes made to manuscript: Following section added to Discussion (new Strengths and limitations section): “This study has several important strengths. A semi-structured interview approach offered the advantage of pursuing more detailed interrogation and clarification of noteworthy comments from participants that emerged during lines of questioning. As this study focussed on patients with gout in an inpatient setting, it has provided us with different patient perspectives on the status and management of their gout and deeper insight into why they needed to have inpatient treatment

specifically instead of just being managed as outpatients. Interviewing both the patients and their respective GPs', at least for those who fully participated and those that provided reasons for not participating, permitted further comprehension of the factors leading to uncontrolled gout. Finally, our use of the Chronic Care Model theory to explain our findings and make recommendations for improving care was a strength of the study.

In terms of limitations, there could have been a potential mismatch of illness perceptions between patients and their respective GPs and we were limited by our inability to recruit all the GPs. Because this was an interview-based study, it is possible that participants' may be subjected to recall bias about medical management received or provided which may lead to incorrect assumptions about the reasons for uncontrolled gout. Some patients were admitted primarily for reason(s) other than gout and there may have been differences in these patients' experience of gout that were not uncovered. As this study was performed in a tertiary care setting, there could be other factors related to gout management in the primary care or community setting that we were unable to identify and make conclusions on". See pages 27 and 28.

Summary points on page 3 also amended/updated to reflect changes.

Reviewer 3:
-Comment: In your reply to my questions about sampling (Question F), you explain that the patients were recruited in the rheumatiology department/service. I do not think that this is an adequately precise description, as it does not explain how they recruited the participants. In my view, you schould clearly express that this is in fact a convenience sample and not in any way a purposive one (as I understand it).
-Our response: Thank you for your comment. We have amended our Methods section to reflect this.
-Changes made to manuscript: Methods amended to reflect the use of convenience sampling (under Recruitment and data collection, subsection Patient): "We recruited inpatients who met the eligibility criteria (Table 1) admitted to the Canberra Hospital in the Australian Capital Territory (ACT). The Rheumatology service provided the patient samples based on the eligibility criteria (Table 1) where they were either directly involved in managing these patients or were consulted by other specialist departments. We chose convenience sampling to obtain detailed insight into patients who are likely to have the most sub-optimally treated gout in our community". See page 6.

-Comment: I want to thank you for your detailed explaination of your views in regard to patient complexity and primary care, e.g. in response to question I. I would suggest to include some of the explainatory passages of your reply in your discussion or adapt these passages to that end, for they explain your views on these issues far better than your revised manuscript does.
-Our response: Thank you for your comment. We have included some of the explanatory content into the manuscript.
-Changes made to manuscript: Following comment added to Discussion (new paragraph 3): "Our study focused on admitted patients with gout – a potentially preventable admission – and how we might improve care in the community. It could be considered that these patients represent the "tip of the iceberg" and are the most complex and difficult to treat. We do not intend to imply that gout is poorly managed throughout primary care, and in most cases of gout, they are managed well in the community. However, our attention to these complex patients reveals learnings that can be applied more generally to gout management and most importantly that the condition should be taught and thought of as a chronic disease instead of an acute condition". See pages 23 and 24.

Several minor amendments made to Discussion (paragraphs 6 and 7). See page 25 for marked changes.

-Comment: The limitations in regard to conclusions about the care landscape due to selective sampling in a tertiary care setting should also be mentioned and discussed in limitations.
-Our response: Thank you for your comment. We have created a strengths and limitations section at the end of the discussion section and have incorporated your comment into this section.
-Changes made to manuscript: Following section added to Discussion (new Strengths and limitations section): “This study has several important strengths. A semi-structured interview approach offered the advantage of pursuing more detailed interrogation and clarification of noteworthy comments from participants that emerged during lines of questioning. As this study focussed on patients with gout in an inpatient setting, it has provided us with different patient perspectives on the status and management of their gout and deeper insight into why they needed to have inpatient treatment specifically instead of just being managed as outpatients. Interviewing both the patients and their respective GPs’, at least for those who fully participated and those that provided reasons for not participating, permitted further comprehension of the factors leading to uncontrolled gout. Finally, our use of the Chronic Care Model theory to explain our findings and make recommendations for improving care was a strength of the study.

In terms of limitations, there could have been a potential mismatch of illness perceptions between patients and their respective GPs and we were limited by our inability to recruit all the GPs. Because this was an interview-based study, it is possible that participants’ may be subjected to recall bias about medical management received or provided which may lead to incorrect assumptions about the reasons for uncontrolled gout. Some patients were admitted primarily for reason(s) other than gout and there may have been differences in these patients’ experience of gout that were not uncovered. As this study was performed in a tertiary care setting, there could be other factors related to gout management in the primary care or community setting that we were unable to identify and make conclusions on”. See pages 27 and 28.

Summary points on page 3 also amended/updated to reflect changes.

Other amendments to manuscript:
-Please note that we have completely changed the way the patient characteristics are now reported in Table 2 under Results so that individual patients are no longer identifiable. We apologise for this as it was never our intention to have potentially identifiable information published.

VERSION 3 – REVIEW

REVIEWER	Felix Holzinger Charité - Universitätsmedizin Berlin Institute of General Practice Germany
REVIEW RETURNED	28-Nov-2019

GENERAL COMMENTS	Thank you taking my comments into account. The manuscript ist much improved and could be published in this form in my view. I have no further concerns that would need to be addressed.