

## PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (<http://bmjopen.bmj.com/site/about/resources/checklist.pdf>) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

### ARTICLE DETAILS

<b>TITLE (PROVISIONAL)</b>	Injury patterns in a large-scale ski resort in the host city of 2022 Winter Olympic Games: a retrospective cross-section study
<b>AUTHORS</b>	Chen, Nayun; Yang, Yuping; Jiang, Yanfang; Ao, Yingfang

### VERSION 1 – REVIEW

<b>REVIEWER</b>	Giovanni Galeoto Sapienza University of Rome
<b>REVIEW RETURNED</b>	07-Mar-2020

<b>GENERAL COMMENTS</b>	The article is complete and exhaustive.  I believe the article must be published in its current form
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<b>REVIEWER</b>	Jamie Cooper Aberdeen Royal Infirmary United Kingdom
<b>REVIEW RETURNED</b>	18-Mar-2020

<b>GENERAL COMMENTS</b>	<p>General Article needs to be revised by a native English speaker</p> <p>Introduction The premise for this article is good. To assess what level of medical facilities are required to serve a Chinese ski resort. Skiing/Snow Boarding accidents are an important cause of injury in both recreational and professional participants and in China participants are greatly increasing in light of 2022 Winter Olympics. It is important that medical facilities in the region have the capability and expertise to deal with the amount and nature of the trauma. We are told that there is concern over the ability of local facilities to cope but there is nothing to evidence this statement. The introduction should not contain information that may be the conclusion of the study e.g. that medical facilities should upscale etc I think that figures to a whole number is fine for the introduction. The objectives are a) to describe the injury patterns b) to get data to guide medical capabilities of hospitals close to the slopes of the 2022 Winter Olympics</p> <p>Methods In general, this should be reported more closely to the STROBE statement This is a retrospective cohort study of patients injured during from a large ski resort in China during the season</p>
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	<p>The setting needs more clearly described. Injured skiers requiring medical attention were either attended to directly by a ski patrol member or attended a resort medical facility. Could patients self-present to such a facility? Were some patients transferred directly off the mountain to hospital?</p> <p>The demographic data collected is described but I am a bit confused as to whether this was routine data collected on to paper/electronic records by the Ski Patrol/ GP/ nurse etc or was this also a survey?</p> <p>Injuries were either involving other skiers or not. The term 'self-inflicted' would be better changed in my opinion.</p> <p><b>Results</b></p> <p>There is no flow chart outlining any exclusions e.g. for incomplete data or patients injured outwith skiing or snowboarding or patients included who were not injured (if it is just injuries that you are looking at) – this may include the 2 cardiac arrest patients if they were not traumatic). 753 injuries out of 388606 visits (only 0.2%) between 1st Nov 2018 and 7th April 2019</p> <p>Tables 1, 2 and 3 can be combined</p> <p><b>Discussion</b></p> <p>Your first paragraph discusses aspects that you have not addressed in your study at all. How can you say environmental and socioeconomic factors influence injury when these have not been measured?</p> <p>The discussion needs shortened with more focus and improved structure</p> <p>Think about what are your main results and what do you think about them?</p> <p>The key thing for me is how your findings relate to your aims. Much of what you allude to in your discussion has not been mentioned before. E.g. it is not clear in your methods that you are just looking at the resort clinic and not the number of patients (presumably also tended to by the ski patrol) who are transferred out.</p> <p>This does allow you to describe the injury pattern you found (the first objective). The fact that people with minor injuries may self-present to another facility without having been seen on the slopes is important but it is unlikely that this will have a big implication on resource recommendations. However, if you have missed a number of severe injuries this this has significant implications for your recommendations.</p> <p>If pre-hospital care is good it does not seem to me that you can advise that a local hospital has paediatric orthopaedics, neurosurgery, max fax etc for what amounts to a relatively small increase in trauma (about 3 cases per day) on the basis of your results.</p>
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<b>REVIEWER</b>	Markus Posch PhD Department of Sport Science - University of Innsbruck/Austria
<b>REVIEW RETURNED</b>	29-Apr-2020

<b>GENERAL COMMENTS</b>	<p>Dear authors,</p> <p>thanks a lot for providing your paper entitled "Injury pattern in a Chinese ski resort in the host city of 2022 Winter Olympic Games" for being reviewed. In general, this papers explores an interesting topic. Epidemiological research is the first logical step to set preventive measures to further avoid injuries etc. Unfortunately, I</p>
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don't think that this paper is good enough for being considered for publication. First, the standard of written English is not acceptable for publication. Second, the scientific style of writing is poor, especially within the results and discussion section. I regret to say that I recommend rejecting this paper.

All the best!

To provide a point-by-point response letter, I clearly state any revisions with the associated line number.

Thanks a lot!

#7: Author

#24: The aim of the stud is to investigate...

#24: do you investigate a special injury pattern or injury patterns? Please clarify and revise this phrase throughout the whole manuscript

#26: mountainside hospital or hospitals, please clarify and check for the whole manuscript

#27: retrospective study

#29: replace "seen" by "treated"

#31: replace "gender" by "sex", check whole manuscript

#68-71: better report more results of other studies (Ruedl et al., 2012,2014,42016; Posch et al., 2017,2019) to give a clear overview of current injury rates. Write about the importance of these wintersports, as these disciplines are annually enjoyed by several million people (Russel et al, Beynnon et al, Burtscher et al. etc)

#75: ...booming of the... ; The proportion of snowboarders and skiers has risen from 8 million in 2015 to 13.2 million in 2018.

#78: have been confronted with an increasing amount of injured skiers and snowboarders.

#80: far away from

#81: ...manage the treatment of severe injuries

#81-83: I don't get the message of this sentence. By the way there are many mistakes (grammar). What do you mean with talents?

#83: Justification for the aim of the study is missing. Please state if there are already existing studies regarding epidemiological studies within skiing/snowboarding related injuries in this ski resort or not. If not, state"...to the best of our knowledge there is no study...

#84: pattern vs. patterns (see comment above)

#85: in a big ski resort in China.... (you did not investigate injury patterns of skiers and snowboarders in China!)

#86: What do you mean with "guide the reform...", please clarify and re-write the aim of the study

#94: risk factors

#97: to treat mild injuries

#97: refer patients???

#99: I would mention the whole information, that was received by patrollers or doctors, so that the reader clearly knows what information was available

#107: were not seen

#108: According to the self-reported years of participation in skiing and snowboarding, patients were classified as beginner (first season), etc.....

	<p>#117: What about collisions with objects?  #119: delete the comma fter collected  #121: That´s not the type of injury – it must be the injury location □  Injury location was categorized into the following four anatomical body regions: head etc.....  #122: suffered from multiple injuries... Generally, place this sentence at the end of this paragraph  #130-133: You should clearly mention why you used a special statistical test – for example: To enable group comparisons between the control and intervention group, independent t tests were used.  #133: was considered to indicate statistical significance.  #137-138: I would not mention the two victims who suffered from fatal cardiac arrest.  #143: add “years” after the figures  #143-145: Re-write this sentence, it is grammatically incorrect  #145: injured skiers and snowboarders  #145-147: Please mention whether you talk about the whole sample or the sub groups  #153: injuries occurred  #156: trails  #159: the proportions of self-inflicted falls and collisions were similar  #160: injury location  #164: multiple injuries</p> <p>#166: Please concentrate on starting the discussion section with repeating the study aim and presenting the most important findings of the underling study. Furthermore, don´t use expressions like “We found...”, write in the third person!  Moreover, place the discussion of the results into the right order as it is mentioned in the method section – currently, it is difficult to follow the discussion as there is no logical development and results are mixed-up.  #179: ...with 9.3% being younger than 15 years and 3.0% being older than 60 years  #187: vacation  #189: ..showed that injuries mainly occurred in these two months, accounting for 9% of all recorded injuries  #192: Don´t use the phrase “our results again”, write in third person!  #196: suffering from  #197: females within  There are countless studies of Ruedl, Burtscher &amp; Posch to mention sex ratios within injuries in skiing etc, have a look at them and include some of them!  #203: Delete the sentence  #210:..., while between 1995 and 2000 only 23.0% of injured patients were snowboarders  #211: Many studies reported that  #215: rates  #216-220: Re-write these sentences, they are grammatically incorrect  #220-222: Is this information necessary? Is it comparable with your data?  #223-225: It´s a kind of contradiction, re-write this sentence  #227: neither in skiers nor in snowboarders  #227: 19?  #228: proportions of injuries to the trunk .... Were found to increase with higher skill level.</p>
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	<p>#233: your presented values are much lower than those reported in Ruedl et al (2014)</p> <p>#234-238: re-write this paragraph it is not written clear</p> <p>#238-245: Generally, the way to present and discuss results is not state of the art – please have a look at other published papers and revise the discussion totally.</p> <p>#245-247: I don't get the message, grammatically incorrect – please revise</p>
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### VERSION 1 – AUTHOR RESPONSE

Response to Dr. Jamie Cooper:

Thanks for your effort in reviewing our manuscript and providing so many valuable opinions. Please find the comments and the following responses below.

Comment 1: Article needs to be revised by a native English speaker

We asked a native speaker to help us polish the language of the manuscript, see LOA2 in the attached file.

Comment 2: The introduction should not contain information that may be the conclusion of the study e.g. that medical facilities should upscale etc

The related sentence has been removed, see LOA4 in the attached file.

Comment 3: In general, this should be reported more closely to the STROBE statement

We reviewed the STROBE statement again and revised the Methods section into a manner in which elements in STROBE statement were listed more clearly, see LOA5 in the attached file.

Comment 4: The setting needs more clearly described. Injured skiers requiring medical attention were either attended to directly by a ski patrol member or attended a resort medical facility. Could patients self-present to such a facility? Were some patients transferred directly off the mountain to hospital?

The ski resort where this study was carried out has its own clinic with a GP retired from a local hospital and a registered nurse. Injured tourists, either self-present or transferred from the slopes by patrol, were first seen by these medical providers. Mild injuries were managed; patients who need further examination and treatment were referred to local hospital; critical patients were transferred to ER. However, there are patients who directly go to the hospital without going to the resort clinic first. We have added a discussion on the issue in our revised manuscript, see LOA6 in the attached file.

Comment 5: The demographic data collected is described but I am a bit confused as to whether this was routine data collected on to paper/electronic records by the Ski Patrol/ GP/ nurse etc or was this also a survey?

The demographic data was routinely collected on patient visits.

Comment 6: Injuries were either involving other skiers or not. The term 'self-inflicted' would be better changed in my opinion.

The classification of "self-inflicted" was used by Reudl et al., 2014. We think the suggested expression is more neutral and preferable. The classification was changed into "involving others or not" according to another reviewer's opinion. The classification emphasizes how the accident happens instead what mechanism causes the damage. See LOA7 in the attached file.

Comment 7: There is no flow chart outlining any exclusions e.g. for incomplete data or patients injured outwith skiing or snowboarding or patients included who were not injured (if it is just injuries that you are looking at) – this may include the 2 cardiac arrest patients if they were not traumatic). Only injured people were analyzed. Unnecessary description that may cause confusion was removed. See LOA8 in the attached file. We further explained how the patients were seen by patrol, resort clinic or local hospital in a flow chart to help readers to better understand which patients were recorded and which patients were missed. See LOA10.

Comment 8: Tables 1, 2 and 3 can be combined

We tried to combine those table, however, we found the table difficult to interpret. Thus, we chose to present our results separately.

Comment 9: Your first paragraph discusses aspects that you have not addressed in your study at all. How can you say environmental and socioeconomic factors influence injury when these have not been measured?

The first paragraph was intended to describe the current state of ski industry and geographic characteristics of ski resorts in China. We have deleted the inconclusive assertion and added content that better introduces our point of view. See LOA9 in the attached file.

Comment 10: The discussion needs shortened with more focus and improved structure. Think about what are your main results and what do you think about them? The key thing for me is how your findings relate to your aims. Much of what you allude to in your discussion has not been mentioned before. E.g. it is not clear in your methods that you are just looking at the resort clinic and not the number of patients (presumably also tended to by the ski patrol) who are transferred out. This does allow you to describe the injury pattern you found (the first objective). The fact that people with minor injuries may self-present to another facility without having been seen on the slopes is important but it is unlikely that this will have a big implication on resource recommendations. However, if you have missed a number of severe injuries, this has significant implications for your recommendations. If pre-hospital care is good it does not seem to me that you can advise that a local hospital has paediatric orthopaedics, neurosurgery, max fax etc for what amounts to a relatively small increase in trauma (about 3 cases per day) on the basis of your results.

After carefully reviewing the comment, we amended our discussion in a way that the two main goals of our article were clearly highlighted, published literature reviewed and compared with our results, major limitations addressed. We further explained how the patients were seen by patrol, resort clinic or local hospital in the flow chart to help readers to better understand which patients were recorded and which patients were missed. See LOA10 in the attached file.

Response to Markus Posch PhD:

Thanks for your effort in reviewing our manuscript and providing so many valuable opinions. Please find the comments and the following responses below.

Comment 1: #7: Author

The typo was corrected. See LOA11 in the attached file.

Comment 2 :#24: The aim of the stud is to investigate...

The expression has been changed. See LOA12.

Comment 3: #24: do you investigate a special injury pattern or injury patterns? Please clarify and revise this phrase throughout the whole manuscript

We investigate several injury patterns. The phrase was revised in the whole article. See LOA13.

Comment 4: #26: mountainside hospital or hospitals, please clarify and check for the whole manuscript

Since there is only one designated hospital near the ski resort, we keep the mountainside hospital in its single form.

Comment 5: #27: retrospective study

The Design has been changed into "retrospective study". See LOA14.

Comment 6: #29: replace "seen" by "treated"

We replaced "seen" by "treated". See LOA15.

Comment 7: #31: replace "gender" by "sex", check whole manuscript

We replaced "gender" by "sex" in the article. See LOA 16.

Comment 8: #68-71: better report more results of other studies (Ruedl et al., 2012,2014,2016; Posch et al., 2017,2019) to give a clear overview of current injury rates. Write about the importance of these wintersports, as these disciplines are annually enjoyed by several million people (Russel et al, Beynnon et al, Burtscher et al. etc)

More studies were reveiwed and reported in our article. The popularity and importance of wintersports were introduced. See LOA17.

Comment 9: #75: ...booming of the... ; The proportion of snowboarders and skiers has risen from 8 million in 2015 to 13.2 million in 2018.

The sentence was revised according to reviewer's comment. See LOA18.

Comment 10: #78: have been confronted with an increasing amount of injured skiers and snowboarders.

The sentence was revised according to reviewer's comment. See LOA19.

Comment 11: #80: far away from

The expression has been changed. See LOA20.

Comment 12: #81: ...manage the treatment of severe injuries

Comment 13: #81-83: I don't get the message of this sentence. By the way there are many mistakes (grammar). What do you mean with talents?

Comment 14: #83: Justification for the aim of the study is missing. Please state if there are already existing studies regarding epidemiological studies within skiing/snowboarding related injuries in this ski resort or not. If not, state"...to the best of our knowledge there is no study..."

#81-83 has been removed. Justification for the aim of the study is added. See LOA4 in the attached file.

Comment 15: #84: pattern vs. patterns (see comment above)  
The phrase was revised in the whole article. See LOA13.

Comment 16: #85: in a big ski resort in China.... (you did not investigate injury patterns of skiers and snowboarders in China!)  
The scope of application was clarified. However, we intended to use this ski resort which has the biggest tourist flow in China as an example to reflect the current state of ski injury in China. See LOA21

Comment 17: #86: What do you mean with "guide the reform...", please clarify and re-write the aim of the study  
One of the aims of our work is to get data to guide medical capabilities of hospitals close to the slopes of the 2022 Winter Olympics. "Reform" may be a big word, so we changed it to "restructure". See LOA22

Comment 18: #94: risk factors  
Instead of "risk factors" of injury, we use "potential risk" to represent possible bad situation, such as rocks on the trail, skiers with no helmet on etc.

Comment 19: #97: to treat mild injuries  
We replaced "manage" by "treat". See LOA23.

Comment 20: #97: refer patients???  
Should be transfer patients. See LOA24

Comment 21: #99: I would mention the whole information, that was received by patrollers or doctors, so that the reader clearly knows what information was available  
All information collected by resort clinic was listed. See LOA25.

Comment 22: #107: were not seen  
Grammar error was corrected. See LOA26.

Comment 23: #108: According to the self-reported years of participation in skiing and snowboarding, patients were classified as beginner (first season), etc.....  
The expression was revised according to reviewer's suggestion. See LOA27.

Comment 24: #117: What about collisions with objects?  
The classification was changed into "involving others or not" according to another reviewer's opinion. The classification emphasizes how the accident happens instead what mechanism causes the damage. See LOA7.

Comment 25: #119: delete the comma after collected  
The comma was deleted. See LOA28.

Comment 26: #121: That's not the type of injury – it must be the injury location □ Injury location was categorized into the following four anatomical body regions: head etc.....  
To better differentiate the injured body part and the location where injury took place, we adopt "injured body part" and "location of injury" to describe the characteristics of ski injury respectively. See LOA29.



Comment 27: #122: suffered from multiple injuries... Generally, place this sentence at the end of this paragraph

The sentence was moved to the end of the paragraph. See LOA30.

Comment 28: #130-133: You should clearly mention why you used a special statistical test – for example: To enable group comparisons between the control and intervention group, independent t tests were used.

The reason for each test method was added in our manuscript, see LOA31.

Comment 29: #133: was considered to indicate statistical significance.

The expression has been changed. See LOA32.

Comment 30: #137-138: I would not mention the two victims who suffered from fatal cardiac arrest. Only injured people were analyzed. Unnecessary description that may cause confusion was removed. See LOA8 in the attached file.

Comment 31: #143: add “years” after the figures

“Years” was added. See LOA33.

Comment 32: #143-145: Re-write this sentence, it is grammatically incorrect

The sentence has been rewritten. See LOA34.

Comment 33: #145: injured skiers and snowboarders

The expression has been changed. See LOA35.

Comment 34: #145-147: Please mention whether you talk about the whole sample or the sub groups

The sentence has been revised according to reviewers' suggestion. See LOA36.

Comment 35: #153: injuries occurred

The expression has been changed. See LOA37.

Comment 36: #156: trails

The word has been changed into plural form. See LOA38.

Comment 37: #159: the proportions of self-inflicted falls and collisions were similar

The expression has been changed. See LOA39.

Comment 38: #160: injury location

To better differentiate the injured body part and the location where injury took place, we adopt "injured body part" and "slope difficulty" to describe the characteristics of ski injury respectively. See LOA29.

Comment 39: #164: multiple injuries

The expression has been changed. See LOA40.

Comment 40: #166: Please concentrate on starting the discussion section with repeating the study aim and presenting the most important findings of the underlying study. Furthermore, don't use expressions like “We found...”, write in the third person!

Moreover, place the discussion of the results into the right order as it is mentioned in the method section – currently, it is difficult to follow the discussion as there is no logical development and results are mixed-up.

After carefully reviewing the comment, we amended our discussion in a way that the two main goals of our article were clearly highlighted, published literature reviewed and compared with our results, major limitations addressed. See LOA10 in the attached file.

Comment 41: #179: ...with 9.3% being younger than 15 years and 3.0% being older than 60 years  
The sentence has been revised according to reviewers' suggestion. See LOA41.

Comment 42: #187: vacation  
The word has been changed. See LOA42.

Comment 43: #189: ..showed that injuries mainly occurred in these two months, accounting for 9% of all recorded injuries  
The sentence has been revised according to reviewers' suggestion. See LOA43.

Comment 44: #192: Don't use the phrase "our results again", write in third person!  
The discussion was rewritten in third person. See LOA44.

Comment 45: #196: suffering from  
The expression has been changed. See LOA45.

Comment 46: #197: females within  
There are countless studies of Ruedl, Burtscher & Posch to mention sex ratios within injuries in skiing etc, have a look at them and include some of them!  
The studies mentioned above were reviewed and added in the discussion. See LOA 46.

Comment 47: #203: Delete the sentence  
The sentence has been deleted. See LOA47.

Comment 48: #210:..., while between 1995 and 2000 only 23.0% of injured patients were snowboarders  
The sentence has been revised according to reviewers' suggestion. See LOA48.

Comment 49: #211: Many studies reported that  
The sentence has been revised according to reviewers' suggestion. See LOA49.

Comment 50: #215: rates  
The word has been changed. See LOA50.

Comment 51: #216-220: Re-write these sentences, they are grammatically incorrect  
Grammar errors were corrected. See LOA51.

Comment 52: #220-222: Is this information necessary? Is it comparable with your data?  
The severity of injury was not recorded, so we intended to supplement this limitation by citing other studies to compare the injury severity between different subgroups. The severity of head injury seems too specific. The sentence has been removed. See LOA52 in the attached file.

Comment 53: #223-225: It's a kind of contradiction, re-write this sentence  
The sentence has been revised according to reviewers' suggestion. See LOA53.

Comment 54: #227: neither in skiers nor in snowboarders  
The sentence has been revised according to reviewers' suggestion. See LOA54.

Comment 55: #227: 19?

It should be 19539, the comma was deleted. See LOA55.

Comment 56: #228: proportions of injuries to the trunk .... Were found to increase with higher skill level.

The sentence has been revised according to reviewers' suggestion. See LOA56.

Comment 57: #233: your presented values are much lower than those reported in Ruedl et al (2014) Thanks for pointing this out. We hypothesized the rate of accident involving other skiers/snowboarders should be higher given that the scale of ski resorts is relatively small while the tourists flow is big in China. We have rewrite the discussion. See LOA57.

Comment 58: #234-238: re-write this paragraph it is not written clear

We have rewrite the discussion. See LOA57.

Comment 59: #238-245: Generally, the way to present and discuss results is not state of the art – please have a look at other published papers and revise the discussion totally.

We have rewrite this part of discussion. See LOA57.

Comment 60: #245-247: I don't get the message, grammatically incorrect – please revise

The sentence has been revised according to reviewers' suggestion. See LOA58.

#### VERSION 2 – REVIEW

<b>REVIEWER</b>	Jamie Cooper Aberdeen Royal Infirmary United Kingdom
<b>REVIEW RETURNED</b>	07-Jun-2020

<b>GENERAL COMMENTS</b>	<p>This is improved but in my opinion, still needs quite a bit of work. I have tried to provide a helpful review but really think that you need to focus on what I perceive is the main goal of the study, which is to get preliminary information about injury profile so that you can begin to plan medical resources for the area.</p> <p><b>INTRODUCTION</b></p> <p>The introduction covers the right ground but the English sentence structure and grammar still needs to be improved so that it reads well. In particular there is a lot of repetition of phrases in the same sentence or contiguous sentences.</p> <p>In order to try and help I have made the following suggestions for structure:</p> <ul style="list-style-type: none"><li>• The key points are Skiing and snowboarding are popular sports but carry a risk of injury in recreational and also professional participants. (I think one summary number for the propensity of injury is sufficient in each group).</li><li>• Snow sports are relatively new to China and participation since Beijing was awarded the 2022 Winter Olympics has increased markedly.</li><li>• The Ski resorts in China are in areas remote from the major cities and it is important that regional facilities are equipped to deal with the number and nature of injuries likely to be sustained, particularly in light of the upcoming Olympics</li></ul>
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AIM: to describe the epidemiology of injured skiers and snowboarders...(take out the 'to the best of our knowledge) in order to guide the resources that need to be in place. (You are also comparing the 2 groups – this is perhaps a secondary aim) Some aspects may be inferred to help prepare for the Olympics in terms of facilities available but the main thrust from this data has to be to look after the medical needs of increasing number of recreational participants.

In general, it should guide what services should be required and where. This will also be influenced by geography and pre-hospital systems (this will be part of your discussion)

#### METHODS

I have tried to write down some principles to better structure this

- Retrospective cohort study of patient attendances at the Wanglong Ski Resort Medical Clinic (2018-19). Some description of the size of the resort and number of ski days would be helpful here with opening times (it appears later)
- This facility was the first point of medical contact for all injured skiers and snowboarders that were not transferred off the mountain directly by helicopter (if this is true)
- Did it receive adult and paediatric patients? Patients could self-present or come via ski patrol.
- The facility was staffed by (...you have this information) and provided definitive management of minor injuries on site and facilitated and appropriate immediate treatment and stabilisation of the more seriously injured and co-ordinated appropriate transfer to regional medical facilities as necessary.
- All patients attending the facility had basic demographics noted routinely including age, sex, skiing or snowboarding, date and time, slope difficulty, whether injury was as a result of collision with another slope user, nature of injury and level of experience. (I think this would be sufficient to allow removal of the sentences on type of injury and slope difficulty – page 7, 111-117)
- The split of analysis to weekends/holidays etc. and to time of day is fine as is description of injury.
- Was consent required?
- Stats: I would talk generically about data being presented in frequencies with percentages, mean (SD), and outline comparative tests depending on the type of variable e.g. categorical etc.

#### RESULTS

I think whole numbers are probably sufficient throughout, perhaps excepting your incidence figure/1000 cases.

The flow diagram (I was suggesting if you had data to put in regarding self-presenters, those brought by ski patrol and injured patients that went directly to hospital off the hill) – as it stands it can be withdrawn as it doesn't help (a comment in the limitations section of the discussion that you may have missed injuries that went off the hill directly should suffice)

During the study period (the dates should be here – not further down) Were 753 people injured or is this the total number of injuries (i.e. did some people have more than one injury logged?) If 753 then the proportion is 0.19%. The number of ski days are needed for the reader to understand the incidence of injury you report. You need to describe your population (Table 1) age, gender, number skiers and I would do your analysis in terms of the whole population first i.e. injury presentations per week day v

	<p>WE/holiday and time of day, slope difficulty, level of experience, solo injuries, type of injury. (The overall data is that which is going to help your recommendations later)</p> <p>You can then do your comparative analysis between injured skiers and snowboarders (Table 2)</p> <p>I still think a bigger comparative Table 2 is the way forward here and I am not sure that the comparative stats are that helpful. The P-values in Tables 2-5 (and the supplementary tables) are not very informative (you give one P value for 4 or 5 variables) and numbers (% in whole numbers) are probably enough, given the nature of the study, for the reader to see the differences between the 2 groups. Your study is primarily to describe what is going on descriptively.</p> <p>Lastly, you have further tables: confusingly labelled Tables 1-6 (again) and not clearly identified as supplementary material that look at differences between sex.</p> <p>A key thing that you have not mentioned for your goal of resource planning is the number of patients requiring ambulance (or other mode) transfer to hospital.</p> <p><b>DISCUSSION</b></p> <p>Please don't repeat things that are already in the manuscript elsewhere. The discussion is also more expansive than required and needs to be focused.</p> <ul style="list-style-type: none"> <li>• We found that the snow sport related injury incidence in China's largest ski resort was&gt;&gt;&gt; comparable with &gt;&gt;&gt;</li> <li>• If such a finding is extrapolated to the whole region then this means &gt;&gt;&gt;2000 sports injuries per season (though we don't know how many needed hospital) – though you mention this limitation in the section</li> </ul> <p>The data that you refer to about age and holiday presentation is not presented in the results that I can see.</p> <p>The main focus of your article is supposed to be the epidemiology, so as to determine your services, not the comparison between skiers and snowboarders – is that right? This needs to be reflected in the discussion.</p> <p>Lastly, and importantly, the data has to empower your claims regarding all the specialities that require to be at the regional facility. If only a few patients required hospital or could easily be transferred further then these claims don't stand.</p>
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<b>REVIEWER</b>	Markus Posch PhD Department of Sport Science of the University of Innsbruck - Austria
<b>REVIEW RETURNED</b>	05-Jun-2020

<b>GENERAL COMMENTS</b>	<p>Dear authors,</p> <p>thanks a lot for providing your manuscript again for review. I found some more mistakes, please check and revise. After revising the manuscript, I recommend this paper for publication.</p> <p>Best regards #155: There was...</p>
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	<p>#166-171: Expression used is not correct, rewrite this sentence  #170: Accidents  #183: higher proportion  #187: ...was no longer - delete this phrase, within the results section you do not interpretate the results  #193: was  #205: Check tenses, use the past tenses.....!!  #240: females  #241: injured body parts - check in the whole manuscript</p>
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## VERSION 2 – AUTHOR RESPONSE

Response to Markus Posch PhD:

Thanks for your effort in reviewing our manuscript and providing so many valuable opinions. Please find the comments and the following responses below.

Comment 1: #155: There was...

The tense was corrected.

Comment 2: #166-171: Expression used is not correct, rewrite this sentence

The sentences were rewritten.

Comment 3: #170: Accidents

'Accident' was changed into 'Accidents'.

Comment 4: #183: higher proportion

The expression was revised.

Comment 5: #187: ...was no longer - delete this phrase, within the results section you do not interpret the results

The sentence has been revised according to the reviewer's opinion.

Comment 6: #193: was

The tense was corrected.

Comment 7: #205: Check tenses, use the past tenses.....!!

We checked tenses in the manuscript and corrected all the mistakes we found.

Comment 8: #240: females

'female' was changed into 'females'.

Comment 9: #241: injured body parts - check in the whole manuscript

The phrase was revised throughout the manuscript.

Response to Dr. Jamie Cooper

Thanks for your effort in reviewing our manuscript and providing so many valuable opinions. Please find the comments and the following responses below.

## INTRODUCTION

The redundant information was removed. Logic was made more clear. Typos and grammar errors were corrected. The aim 'to describe the epidemiology of injured skiers and snowboarders in order to guide the resources that need to be in place' was emphasized.

## METHODS

Adjustment was made to describe the scale and opening time of the resort, the staff of the clinic, how patients were seen by resort clinic.

The clinic receive adult and pediatric patients as well as implied by results.

Detailed definition and classification was preserved to avoid misunderstanding.

Informed consent was not applicable due to the epidemiological and anonymous nature of the study.

Description of statistic analysis was revised according to your advice.

## RESULTS

The total skier days was corrected. The flow chart was deleted.

We first analyze the whole injured population and then divide them into different subgroups.

Typo was corrected. And some data less important was moved to supplementary files.

The number of patients requiring ambulance (or other mode) transfer to hospital was not recorded. Previous studies were reviewed in discussion.

## DISCUSSION

In discussion part, we trimmed some redundant part and focused on the injury pattern and following recommendations on the reform of local facility. The comparison between subgroups interluded and took less length.

At last, I want to express our appreciation on behalf of all authors for your advice. Some of your suggestion really made our manuscript more applicable and readable. We are grateful for your sincerity and passion.

### VERSION 3 – REVIEW

<b>REVIEWER</b>	Jamie Cooper Aberdeen Royal Infirmary Aberdeen Scotland
<b>REVIEW RETURNED</b>	14-Sep-2020

<b>GENERAL COMMENTS</b>	Congratulations on a much improved article with results that are clearly presented and interpreted. I know English is not your first language but the grammar and sentence structure needs to be revised by a native English speaker to improve the article before publication. The discussion is too long and much of this is due to the sentence structure. It would be straightforward to make the same points in many less words, without removing any data. I hope that you can find someone to help with this. Well done
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### VERSION 3 – AUTHOR RESPONSE

Response to reviewer, Dr. Jamie Cooper

A native speaker was asked to help to revise our manuscript. Some of the grammar and sentence structure was revised. The Discussion was shorted and revised to be more straight forward.