Reviewer’s report

Title: SPECIALIST LINK AND PRIMARY CARE NETWORK CLINICAL PATHWAYS- A NEW APPROACH OF PATIENT REFERRAL: A CROSS-SECTIONAL SURVEY OF AWARENESS, UTILIZATION AND USABILITY AMONG FAMILY PHYSICIANS IN CALGARY

Version: 1 Date: 17 Oct 2019

Reviewer: Research Square Reviewer 2

Reviewer's report:

PEER REVIEWER ASSESSMENTS:

OBJECTIVE - Full research articles: is there a clear objective that addresses one or several testable research questions? (Brief or other article types: is there a clear objective?)
No - there are minor issues

DESIGN - Is the current approach (including controls and analysis protocols) appropriate for the objective?
No - there are minor issues

EXECUTION - Are the experiments and analyses performed with sufficient technical rigor to allow confidence in the results?
No - there are minor issues

STATISTICS - Is the use of statistics in the manuscript appropriate?
No - there are issues with the statistics in the study

INTERPRETATION - Is the current interpretation/discussion of the results reasonable and not overstated?
No - there are major issues

OVERALL MANUSCRIPT POTENTIAL - Has the author addressed your concerns sufficiently for you to now recommend the work as a technically sound contribution? If not, can further revisions be made to make the work technically sound?
Maybe - with major revisions

PEER REVIEWER COMMENTS:

GENERAL COMMENTS: RE-REVIEW OF THE MANUSCRIPT TITLED SPECIALIST LINK - A NEW APPROACH OF PATIENT REFERRAL: A CROSS-SECTIONAL SURVEY STUDY
Thanks for the opportunity to re-review this manuscript. The study is important for patient management plans and primary care-specialty care collaborative management plans.

GENERAL COMMENTS
1. Authors should write in active voice appropriately.
2. Authors have admitted the limitations of the study raised by previous reviewers and the need to re-write some sections of the manuscript.
3. Limitations of the study have also been expanded to accommodate comments by previous reviewers.
4. The limitation posed by small sample size is acknowledged by this reviewer. Generally, medical professionals constitute a difficult population triad to carry out study or survey on. This is particularly more glaring in on-line survey especially in resource-poor contexts.
5. This reviewer assessed what authors have submitted which is in tandem with one of the core competences of Family/Primary Care Physicians as referral and linkage expert. However, authors should limit the inferences from this survey to their responsorial participants. Generalization to the entire Family/Primary Care Physician in Calgary is inappropriate. [Ecological fallacy] Non-responders may have characteristics of interest pertinent for the survey but were not part of the study. They may participate in future studies.
6. Single level binary logistic regression analysis done by the authors is appropriate for the study design [Tables 4 and 5] and is accepted by this reviewer. However, authors should provide a column for the response categories in tables 4 and 5.
7. The recommended use of sensitivity analysis by one of the previous reviewers to compensate for small sample size may not appropriate for the study design since non-responders didn't participate in the study ab initio.
8. Frequency summations in tables 1 - 3 should be re-checked for statistical appropriateness and correctness. The titles of the tables should also be recast to reflect the contents of the tables.
9. Authors should interpret appropriately the results of the ORs [OR &gt; 1] that were more than the nullity=1 [null hypotheses] appropriately. Although this reviewer accepted the use of 3-times, 5-times……..etc in the results of ORs[OR &gt; 1] that are more than the nullity(1); reporting the results as …… 2.6 or 4.6 times, etc are not acceptable. Authors should approximate to highest whole number or use more meaningfully percentages.
10. Authors should provide primary and secondary reports of the results of logistic regression in order to enhance comprehension and aid discussion.
11. Conclusion should be recast to reflect the significant findings of the study. Considering apriori set clear objectives.

SPECIFIC COMMENTS

TITLE SECTION:
1. The title should be recast to reflect the contents of the manuscript and also minimize limitations of the study.
2. The title contains tautological words 'study' and 'survey' Authors should understand that a 'study' is technically different from a 'survey' From the contents of the manuscript and method of data collection, this is a 'survey'.
3. From the contents of the manuscript, authors studied 'Specialist link' and 'Primary Care Network Clinical Pathways. These keywords should appear thematically in the title in order to guide the readers appropriately.
4. Authors should also specify on the title what they surveyed among the respondents in order focus the survey and guide the readers appropriately.
5. The site of the study should be included for epidemiological completeness

SUGGESTED TITLE:
SPECIALIST LINK AND PRIMARY CARE NETWORK CLINICAL PATHWAYS- A NEW APPROACH OF PATIENT REFERRAL: A CROSS-SECTIONAL SURVEY OF AWARENESS, UTILIZATION AND USABILITY AMONG FAMILY PHYSICIANS IN CALGARY

ABSTRACT SECTION:
1. Write Abstract section under Background; Aim or Objective(s); Methods; Results; Conclusion, keywords.
2. Background: Separate background from aim/objectives. Use aim or objectives appropriately based on the recommended pattern by the journal of submission.
3. Background: Accepted.
4. Aim or Objective[s]: Re-cast the aim/objective(s) to reflect the suggested title. Change 'purpose' to aim' Delete the word 'estimate' and replace with appropriate word to reflect the study design. The use the word estimate' is inappropriate.
5. Methods. Re-write this section in order to focus the study appropriately. Re-write to reflect study design, study respondents, study period, sampling and then methods. Include operational information on the rating scale[1 - 10] with their summative interpretations.
6. Results:
   i. Start result section with age and sex distribution and any other relevant biodemographic determinants of patients' referral.
   ii. The use of words 'most' 'around' etc is neither a report or a result and should be deleted from the result section. Authors should state the actual numeric values of the responses. Authors can include the values with percentages in parenthesis. The provided percentages are confusing.

PLEASE READ….

……Most of the family physicians (89%) were aware of Specialist LINK [95% Confidence Interval (84% - 92%)]; of those, 72% were using it in their clinical practice. Around 36% had used it more than 5 times…..

READ ALSO…..

……Around 55% of family physicians were aware of PCN Clinical Pathways [95% Confidence Interval (48%- 60%)]; of those, 74% were accessing and following PCN Clinical Pathways in their clinical practice……
iii. KINDLY INTERPRET THE RESULTS OF LOGISTIC REGRESSION APPROPRIATELY BASED ON NULL HYPOTHESIS FOR ORs. PROVIDE FOR EACH FACTOR [ORs[COR/AOR]; 95% CI; P-value=]
iv. Authors should interpret appropriately the results of the ORs[OR>&gt;1] that were more than the nullity=1 [null hypotheses] appropriately. Although this reviewer accepted the use of 3-times, 8-times……,etc in the results of ORs[OR>&gt;1] that are more than the nullity(1); reporting the results as …… 2.6 or 4.6 times, etc are not acceptable and didn't convey meaningful statistical inferences. Authors should approximate to highest whole number or use more meaningfully percentages.

PLEASE READ THIS

…..We found that female family physicians were 2.6 times more likely to be aware of Specialist LINK compared to male physicians. Also, those with less than 5 years of experiences were 4.6 times more likely to be aware of Specialist LINK compared to those with 5 or more years of experience…..

7. Conclusion
i. Please focus conclusion on the study respondents and to reflect the statistically significant results of the study considering the aim/objectives of the study.

This sentence is not conclusion. PLEASE READ….

….. The high uptake of these services show the potential of significant improvement in the physician-specialist referral process………..

KEYWORDS:
i. Provided keywords are not inclusive of pertinent study variables
ii. Re-cast based on journal specification or use MeSH guideline.

BACKGROUND:
1. Authors should ensure that in-text citation is serial and in accord with journal of submission recommendations.

SEE THIS…. 

…..These challenges may consequently lead to potentially irreversible chronic illnesses or injuries, or even permanent disabilities [3, 2].

METHODS:
Sample size determination

1. Authors should provide the details of the sample size determination.
2. Justify the use of power of 80% considering the study design and key variables of the survey which is based on confidence intervals and precision.
3. What was the source of the 50% response distribution
PLEASE READ…

…….minimum of a 235 physician sample was required to have statistically significant findings at 10% margin of error, 80% power and 50% response distribution….

Operational definition of scale 1 - 10

Authors should provide operational definition of:

i. Scale 1 - 10 used rating of specialist link. What was 1,2,3,4,5,6,7,8,9,10 on the scale?

ii. Scale 1 - 10 used rating for the usefulness of PCN Clinical Pathways. What was 1,2,3,4,5,6,7,8,9,10 on the scale?

RESULTS:

1. The use of words 'most' 'around' etc is neither a report or a result and should be deleted from the result section. Authors should state the actual numeric values of the responses. Authors can include the values with percentages in parenthesis. The provided percentages are confusing.

2. Frequency summations in tables 1 - 3 should be re-checked for statistical appropriateness and correctness. To aid understanding authors should use this pattern

Example:

Eighty-nine percent(215/242) of family physicians reported that they were aware of Specialist LINK [95% CI (84% - 92%)]

Kindly re-check other frequencies, they are either inappropriate in numerator or denominator or both and hence the percentages are inappropriate.

TABLES 1 - 3:
1. The title of the tables are inappropriate. Please recast the titles to reflect the contents of the table.
2. Provide the total number[denominator] for each of the variables in the variable column of the table.

Example:

Awareness of specialist LINK (N=242)

ETC, ETC, ETC

3. Kindly use asterisks[*; **; ***etc] to denote significant factors

TABLE 4:
1. Were the ORs in the table crude ORs or adjusted ORs?

2. Draw appropriate table with response categories and indicate significant variables. See sample tabular format below.

3. How did you choose the reference category?

<table>
<thead>
<tr>
<th>Variables</th>
<th>Aware of specialist LINK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes(%)</td>
<td>No(%)</td>
</tr>
<tr>
<td>Crude OR</td>
<td>Adjusted OR</td>
</tr>
</tbody>
</table>

TABLE 5:
1. Were the ORs in the table crude ORs or adjusted ORs?

2. Draw appropriate table with response categories and indicate significant variables. See sample tabular format below.

3. How did you choose the reference category?

<table>
<thead>
<tr>
<th>Variables</th>
<th>Aware of PCN clinical pathways</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes(%)</td>
<td>No(%)</td>
</tr>
<tr>
<td>Crude OR</td>
<td>Adjusted OR</td>
</tr>
</tbody>
</table>

TEXTS ON LOGISTIC REGRESSION:
1. Authors should interpret appropriately the results of the ORs [OR>1] that were more than the nullity=1 [null hypotheses] appropriately. Although this reviewer accepted the use of 3-times, 8-times, etc in the results of ORs[OR>1] that are more than the nullity(1); reporting the results as 2.6 or 4.6 times, etc are not acceptable and didn't convey meaningful statistical inferences. Authors should approximate to highest whole number or use more meaningfully percentages.

2. Authors should provide primary and secondary reports of the results of logistic regression in order to enhance comprehension and aid discussion.

3. This sentence with 50% less likely…. Is inappropriate and should be re-cast to reflect appropriate statistical interpretations and inferences. The ORs crossed the nullity=1[Null hypothesis] and is neither less likely nor more likely.

PLEASE READ…..

….. Those working in rural setting were 50% less likely to report being aware of PCN Clinical Pathways compared to those in urban settings; however, the difference was not statistically significant….

CONCLUSION:
Conclusion should be recast to reflect the significant findings of the study. Considering apriori set clear objectives.

These sentences are not conclusion.

PLEASE READ...

……..The high uptake of these services shows their potential to significantly impact and improve the physician-specialist referral process. The improve referral process would increase patient satisfaction and access to health care services.

We recommend investing more resources to increase awareness and utilization of PCN Clinical Pathways in rural areas. Future studies should also capture the perspective of specialists and patients about Specialist LINK to assess the impact and sustainability of Specialist LINK and PCN Clinical Pathways……..

Authors can provide sub-sections if recommended by journal of submission on:

i. Recommendations
ii. Recommendation for future studies

RECOMMENDATION:
MAJOR REVISION

Thank you

REQUESTED REVISIONS:
STATISTICAL SUMMATIONS, LOGISTIC ANALYSIS AND INTERPRETATIONS

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No
Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

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