Author's response to reviews

Title: Duration of temporary catheter use for hemodialysis: an evaluation of renal units in Brazil.

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Author's response to reviews: see over
Revisions

Manuscript: “Duration of temporary catheter use for hemodialysis: an evaluation of renal units in Brazil”


New title: “Duration of temporary catheter use for hemodialysis: an observational, prospective evaluation of renal units in Brazil”.

<table>
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<th>Editorial Comments</th>
<th>Response</th>
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<tr>
<td>“We recommend that you ask a native English speaking colleague to help you copyedit the paper. If this is not possible, you may need to use a professional language editing service. For authors who wish to have the language in their manuscript edited by a native-English speaker with scientific expertise, BioMed Central provides a professional language editing service (<a href="http://www.edanzediting.com/bmc1">www.edanzediting.com/bmc1</a>). All changes made when revising the manuscript were highlighted in the text (yellow).”</td>
<td>In addition to the suggestions of the reviewers, we use a professional language editing service (<a href="http://www.edanzediting.com/bmc1">www.edanzediting.com/bmc1</a>). All changes made when revising the manuscript were highlighted in the text (yellow).</td>
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BioMed Central recommends Edanz (www.edanzediting.com/bmc1). BioMed Central has negotiated a 10% discount to the fee charged to BioMed Central authors by Edanz. Use of an editing service is neither a requirement nor a guarantee of acceptance for publication. For more information, see our FAQ on language editing services at http://www.biomedcentral.com/info/authors/authorfaqs#12”.

<table>
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<th><strong>Reviewer:</strong> Rita McGill</th>
<th><strong>Response</strong></th>
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<td>“Overall, this is a worthy paper that adds to the value of the fistula surveillance programs already available in Brazil. I really liked the use of the Frailty Model to delineate the...”</td>
<td>Thank you for your general comments. We will answer your questions and embrace all its grammatical advice.</td>
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important factors. I think this paper can be easily edited to publication quality, but I have a few questions ... and a great deal of grammatical advice”

The section on the study population was confusing to me. I wasn’t sure how you could be an incident patient without having a first record for dialysis and did not understand why the authors merged ‘first record for hemodialysis’ with ‘did not have HIV’ into a single exclusion group. It would be clearer to keep the first sentence and then say: ‘X were excluded because their records were incomplete, including two in whom hemodialysis reportedly started after the date of death. Y were excluded because of HIV, and Z were excluded for….’ Ultimately, this study included 55,589 subjects.

This section was modified as suggested by reviewer:

“The total of incident patients in RRT from 01/01/2000 to 12/31/2004 who belonged to the National Database of RRT was 90,356. Of these, 72,155 started on hemodialysis. Two patients were excluded for whom hemodialysis reportedly started after the date of death. Four hundred and forty patients were excluded because of HIV, 1,874 were excluded because they were younger than 18 years old at baseline, 9,834 were excluded because they had no record of their first hemodialysis unit, and 4,416 because they were dialyzed in units with less than twenty patients. Ultimately, this study included 55,589 subjects.”
I can see why the date of fistula surgery is easier to recover than the date of catheter removal ... but the latter would be clinically more relevant. Even a successful fistula will not go into service for 6-8 weeks ... and many fistulas do not mature. Even though you probably cannot change your methodology, you should discuss that the actual proportion of catheters includes many patients who have had their first surgeries.

We agree. So, we include this limitation in the manuscript in discussion section (page 12, paragraph 3):

"Limitations inherent in the use of an administrative database should be considered for the present investigation because factors such as socioeconomic level, race or ethnicity, and co-morbid conditions could not be investigated. In addition, we used the dependent variable of the date of fistula surgery, and not the date of catheter removal, because in the National Database of RRT there are only the dates of the creation of the first AVF. However, we must consider that the date of catheter removal would be more clinically relevant, because even a successful
A fistula will not go into service for 6-8 weeks and many fistulas do not mature. Thus, the proportion of those with the first AVF surgery included some patients who have had their first surgeries but for whom the maturation of the AVF ‘failed’.

On page 8, paragraph 4, the last sentence appears to state that the South region has a 17% lower probability of fistula creation, compared to residents of the Southern. Unless the South and Southern regions are separate, there is something wrong with the sentence. The sentence was wrong. Instead of “Southern” region, “Southeast” is the correct. The sentence was changed: “Patients who lived in capital cities had an 8% lower probability for the creation of the first AVF compared to those who lived in the interior cities. Residents of the South, Midwest, Northern, Northeast regions also had a reduced probability of approximately 17%, 12%, 12% and 9%, respectively, in relation to the residents of the Southeast.”
In general, reference tags and statistical parentheses in mid-sentence make text harder to read, and should be avoided whenever possible.

The entire manuscript was reviewed and it was amended.

<table>
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<td><strong>Grammar/spelling suggestions:</strong></td>
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<tr>
<td>This manuscript seems to have been written by an educated and intelligent person who does not happen to be a native speaker of English. Please permit me to make a large number of small suggestions that will make the text easier to read and more grammatical.</td>
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</table>

Abstract/Background:
catheter # catheters; used preferentially # reserved; shorter#lower; time and cost # times and costs

All suggestions were accepted.
patients kept with a temporary catheter
# patients with temporary catheters
of quality for renal units # of the
quality of renal units

Abstract/Conclusion:
Fistula # fistulas

Page 3/ Paragraph 1:
“Chronic hemodialysis requires
permanent vascular access that can be
used for months or years.”
“Temporary vascular access can be
obtained with cuffed or non-cuffed
catheters.
“Catheters should be reserved for acute
dialysis, when immediate access is
needed [1] or for patients for whom
permanent vascular access is
problematic.”
Page 3/Paragraph 2
“Continuing use of temporary catheters ...
This type of access is # Fistulas are; shorter # less;
“better clinical results, a higher quality of life, and increased survival, compared to temporary catheters [6,7,8].

Page 3/Paragraph 3
“An AV fistula should be constructed at least 6 months prior to dialysis, to permit maturation; a graft can be used after 3-6 weeks.”
Therefore, in spite # Despite

Page 3/Paragraph 4, into page 4
“...patients with a temporary vascular
access for more than 3 months is used a quality indicator for renal units, which are responsible for overseeing the placement of 

Page 5/Paragraph 3
“Variables related to the renal unit included: type (private vs. public), location (hospital-based vs. satellite) and whether or not the unit had rooms for outpatient surgeries.”

Page 6/Paragraph 3
“We used the significance value of the unit variables and the likelihood ratio test to choose which unit variable would be the frailty variable.”

Page 7/ Paragraph 3
The average number of patients can be
calculated from the data given, so the sentence is unnecessary and may be removed.

Page 7/Paragraph 4
time for the first AVF # time to the first AVF

Page 8/Paragraph 1
“from 398.8 to 546, showing the importance of evaluating the influence of the renal units upon providing...”

Page 9/Paragraph 2
“Patients whose renal units had frailty < 1 tended to have longer waits for AVF surgery, whereas a frailty > 1 increased the probability of having surgery.”
Increasing age was associated with longer times with temporary catheters, possibly because older patients were more likely to have vascular disease, making fistulas more difficult to establish …

hypertension was associated with a lower probability…
study # studies
This proposition is plausible for Brazil, where hypertensive patients face difficulties in obtaining pre-dialysis care, which reduces their chances of having a mature access at the time of dialysis initiation.”
“... who lived in capital cities had a lower probability of having timely performance of fistula surgery.”

Page 12/Paragraph 3
“color, and co-morbid conditions could not be investigated.” Please be careful to keep most of your verbs in the past tense; I’m not sure I caught every single one.

**Level of interest:**
“An article whose findings are important to those with closely related research interests”.

By suggesting that the maintenance of temporary catheters for chronic hemodialysis may be related to the renal units, which is an important indicator of quality of care provided to these patients, we are pointing out an important focus of action. So, we believe that BMC Nephrology is the most appropriate journal for publication of this manuscript, whose readers include nephrologists, other healthcare professionals and managers.

**Quality of written English:**
In addition to the suggestions of the reviewers, we use
"Needs some language corrections before being published" a professional language editing service (www.edanzediting.com/bmcl).

**Statistical review:**
"No, the manuscript does not need to be seen by a statistician".

**Declaration of competing interests:**
"I declare that I have no competing interests".

**Reviewer:** Satoshi Morimoto

**Reviewer's report:**
"In the present study, BONFANTE, G. M. et al. evaluated factors associated with the time between the beginning of hemodialysis with a temporary catheter and the placement of the first arteriovenous fistula in Brazil. They found that 57% of the patients..."
maintained a temporary catheter until censured event. Among the patients who underwent fistula in the period of the study, 18.2% maintained the temporary catheter for more than three months until the fistula creation. They identified five statistically significant factors associated with the longer time until the first fistula: higher age; having hypertension and cardiovascular diseases as cause of chronic renal disease; residing in capitals cities and certain regions in Brazil and the type of renal unit. They concluded that monitoring the provision of arteriovenous fistula in renal units could improve the care given to patients with end stage renal disease.

**Major points**

- The results suggest that renal units are an important focus of activity on the quality of care.
to help to reduce the use of temporary catheters.

- More information about geographical features in Brazil is required to help understanding of the content of this study for the readers”.

| “Minor points |
|---|---|
| - There are several grammatical errors that need to be corrected”.|  

Thanks for the suggestion. More information about geographical features in Brazil was added to the manuscript (section Discussion, page 10, last paragraph:

“Brazil is divided into five regions: Southeast, South, Midwest, Northern and Northeast. This division emphasizes a historical and spatial perspective, referring to economic and social characteristics and political organization of the national space [22]. The differences...”

Minor points
- There are several grammatical errors that need to be corrected”.

In addition to the suggestions of the reviewers, we use a professional language editing service (www.edanzediting.com/bmc1).
| Level of interest:  
| "An article of limited interest". | By suggesting that the maintenance of temporary catheters for chronic hemodialysis may be related to the renal units, which is an important indicator of quality of care provided to these patients, we are pointing out an important focus of action. So, we believe that BMC Nephrology is the most appropriate journal for publication of this manuscript, whose readers include nephrologists, other healthcare professionals and managers. |
| Quality of written English:  
| "Needs some language corrections before being published". | In addition to the suggestions of the reviewers, we use a professional language editing service (www.edanzediting.com/bmc1). |
| Statistical review:  
| "No, the manuscript does not need to be seen by a statistician". | - |
| Declaration of competing interests:  
| "I declare that I have no competing interests". | - |