Reviewer's report

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

**Version:** 2  **Date:** 14 July 2011

**Reviewer:** Rita McGill

Reviewer's report:

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 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.

**Minor Essential Revisions**

1. 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.

2. 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.

3. 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.

4. In general, reference tags and statistical parentheses in mid-sentence make text harder to read, and should be avoided whenever possible.

**Discretionary Revisions**

**Grammar/spelling suggestions:**

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.
Abstract/Background:
catheter # catheters; used preferentially # reserved; shorter#lower;
time and cost # times and costs
patients kept with a temporary catheter # patients with temporary catheters
of quality for renal units # of the quality of renal units

Abstract/Results:
Censured # censored; underwent fistula in # had fistula surgery during
Maintained the # had a;
cardi# cardiovascular diseases (HR ...) as cause # cardiovascular diseases as the
cause (HR...)
capitals # capital

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.”

Page 10/Paragraph 2
“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 …”

Page 10/Paragraph 3
“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.”

Page 10/Paragraph 4
“… 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
Quality of written English: Needs some language corrections before being published

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.