Reviewer’s report

Title: A Population-based Analysis of Leaving the Hospital Against Medical Advice: Incidence and Predictors

Version: 2 Date: 23 April 2013

Reviewer: Eberechukwu Onukwugha

Reviewer’s report:

This study investigates predictors of leaving the hospital against medical advice using a large population-based dataset available over a 19 year time period. The study is not specific to a given disease setting and thus provides a broad-based view of AMA discharge as well as trends over time. In terms of predictors of leaving AMA, there are a few factors that are newly-identified otherwise results are confirmatory of previously-identified predictors of leaving AMA. The authors accomplished the stated objective of providing population-based information regarding predictors of AMA discharges across a broad set of disease categories.

Discretionary revisions:

1. Page 6, middle paragraph: clarify whether the ‘Most Responsible Hospital Diagnosis’ from the index hospitalization was used or whether only non-MRHD diagnoses were used in determining conditions for the Elixhauser comorbidities.

2. Page 9, last paragraph: Would not the variable identifying an AMA discharge in the prior hospitalization then take on a missing value if there was no prior hospitalization? There are other variables that are conditional as well, e.g. identifying the Elixhauser comorbidities from pre-index data is conditional on having a prior hospitalization (unless conditions are determined from outpatient data, in which case their identification is conditional on having pre-index health services utilization).

Minor essential revisions:

1. Methods section: Clearly state exclusion criteria. The one exclusion criteria that was noted was the exclusion of hospital episodes lacking discharge diagnoses. Was this the only exclusion?

2. Page 7, 1st full paragraph: clarify that year fixed effects and categorical measures based on hospital urban or rural location also were included in the regression model.

3. The confidence interval on the adjusted OR is not provided for all measures in Table 3.

4. Would suggest appending the following phrase to the title of Table 4: “excluding history of leaving AMA.”

Major compulsory revisions:

1. Page 6, middle paragraph: The text describes the calculation of the
comorbidities using Elixhauser categories. Were there individuals with no hospitalizations in the one year prior to the index hospitalization? If so, how was this handled in terms of calculating the comorbidity measures?

2. Page 7: given the attention paid to the potential confounding of ‘prior discharge AMA’, it would be useful to see a discussion of the findings regarding confounding, based on results provided in Tables 3 and 4.

3. Provide discussion of potential impact of omitted variables such as ethnicity, marital status, admission source (e.g. ER?), or discharge day of the week on the results. Also, the fact that the proportion of discharges AMA is not decreasing over the time period is interesting and worth mentioning, particularly given the relationship that has been documented between discharges AMA and downstream health services utilization and morbidity.

4. Page 10: provide AIC/BIC and c-statistic for the prediction models reported in Tables 3 and 4.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests.