Reviewer's report

Title: Development of a Validation Algorithm for 'Present on Admission' Flagging

Version: 2 Date: 28 April 2009

Reviewer: Patrick S Romano

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Minor Essential Revisions - The author can be trusted to make these. For example, missing labels on figures, the wrong use of a term, spelling mistakes.

Page, paragraph
4-7 The Introduction/Background is too long. Specifically, the second paragraph on page 4 is superfluous, and the lower half of page 6 could be substantially shortened.

4, end You may also be interested in citing Houchens, Elixhauser, Romano in Jt Comm J Qual Patient Saf 2008 Mar;34(3):154-63.

7,4 I am curious why you did not demand unanimous agreement, given that you are labeling the flagged non-POA markers as “invalid.” It seems counterintuitive to label something as invalid when one out of three reviewers thought it was valid. To the extent that you are using this tool to identify clearly incorrect reporting, a higher threshold would seem appropriate. Please test the impact of requiring 3/3 agreement, if you have not already done so.

7,5 I do not understand what you mean in this paragraph, especially given that reference 32 is not available. Why weren’t these 61 codes identified by your HIM reviewers, given that they reviewed the entire ICD-9-CM? How did you determine that they should be added to the list? If you were comfortable with your HIM survey process, then why did you insert this additional procedure for identifying invalid codes? What gives you confidence in adding these 61 codes?

8,4 It is unclear what you mean by “the sources of greatest uncertainty.” I cannot find any clear definition of “uncertainty” in the Methods section, although I can track the N=1,223 back to Table 1. Was there any effort to bring reviewers to agreement, though discussion or other means, and if not, then why not?

9,5 In the USA, these codes “relating to factors influencing health status” are not subject to POA coding. According to ICD-9-CM Coding Guidelines, they “represent circumstances regarding the healthcare encounter or factors influencing health status that do not represent a current disease or injury.” For example, it is unclear why “palliative care” and “cancelled procedures” cannot be C-flagged. Palliative care may be initiated either prior to admission or after admission. Procedures may be canceled either prior to admission or after admission. Why are these C-flags invalid by definition? Please consider removing them from the “invalid” list, if you share my concern.
11,2 These codes that represent both a chronic disease and an acute complication are common and important. In the USA, Coding Guidelines clearly advise coders to “Assign N if any part of the combination code was not present on admission (e.g., obstructive chronic bronchitis with acute exacerbation and the exacerbation was not present on admission; gastric ulcer that does not start bleeding until after admission; asthma patient develops status asthmaticus after admission)... Assign “Y” if ALL PARTS of the combination code were present on admission (e.g., patient with diabetic nephropathy is admitted with uncontrolled diabetes).” This advice directly contradicts the “Victorian prefix/flagging rules,” which give lower priority to the C (complication, not POA) flag. Hence Australian coders may be confused if they have previously seen or heard of US coding guidelines.

10,2 Here you say 10,570 codes, but you earlier said 10,567. Please reconcile.

21 Please clarify what AEPICQ means.

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

**Quality of written English:** Acceptable

**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.