Reviewer's report

Title: Effects of Care Pathways on the In-Hospital Treatment of Heart Failure: A Systematic Review

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Reviewer: Larry Allen

Reviewer's report:

Dr Kul and colleagues have submitted the manuscript entitled “Effects of Care Pathways on the In-Hospital Treatment of Heart Failure: A Systematic Review” for consideration of publication in BMC CVD. The authors pulled all studies from 1975-2011 that assessed the relationship of hospital care pathways with clinical outcomes (and cost).

MAJOR COMPULSORY REVISIONS

1. Others have reviewed overall CPs in this manner (particularly citation #20 Cochrane review). Here focus in on HF CPs alone. The authors argue that “to avoid possible problems of generic meta-analysis, meta-analysis for specific care pathways should be performed to evaluation performance of care pathways.” However, care pathways for HF only represents a framework for a wide range of possible mechanisms. Therefore it is unclear to me that the approach taken by the authors, i.e. confining to HF only, does anything to overcome this problems of “generic” CP systematic review and meta-analysis. This must be addressed (i.e. adding more description of each CP evaluated).

2. The use of CPs going all the way back to 1975 makes no sense to me, other than to provide historical context. This only increases the heterogeneity of the CPs. At least for patients with reduced left ventricular ejection fraction, treatment options have increased dramatically (albeit tested primarily in the outpatient setting). Additionally, changes in health care delivery and financing have significantly altered care pathways, especially with institution of DRG payment system in the US and relationship to LOS. Similar to the above comment, better describing each CP evaluated may help. Or presenting a sensitivity analysis to the last 10 years (or something like that)?

3. Combining RCTs with observational data is of questionable value. The Figures nicely split RCT and CT, and clearly show that the CT findings are always more robust/positive than the RCT. However, the text and abstract do not adequately recognize this problems with including observational data in pooled analyses.

4. Because of this focus on HF-specific CP, the total number of studies is quite small (7 total, less in many of the pooled analyses, and only 3 RCT). This also limits the value of the approach.

MINOR ESSENTIAL REVISIONS
5. The first paragraph of the Introduction on HF significance should basically be eliminated. It is not specific to the question and is redundant with how far too many articles on HF begin.

6. Either use abbreviation CP or not; don’t use sometimes.

7. The Figures should consistently show the study by name WITH YEAR.

DISCRETIONARY REVISIONS
N/A.

**Level of interest:** An article of insufficient interest to warrant publication in a scientific/medical journal

**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.