Reviewer's report

Title: Many Missed Opportunities for Earlier Diagnosis Occur in Patients Diagnosed with Colorectal Cancer

Version: 2 Date: 16 May 2008

Reviewer: David Weller

Reviewer's report:

This paper is based on an analysis of a cohort of patients with CRC, within the Rural Veterans Administration health care system in the US. Participants were patients with CRC diagnosed between January 2000 and January 2007. The authors brought together information from a range of sources including progress notes, test ordering requests and pathology, laboratory and imaging results.

The purpose of the analysis was to examine diagnostic delays and also to look for evidence of colorectal screening. The other stated secondary objectives were to identify system and patient factors which might have contributed to diagnostic delays or absence of screening. The results were based on 150 cases of colorectal cancer which met the inclusion criteria; the authors reach a range of conclusions about the cause of various diagnostic delays and provide descriptive information on pathways to diagnosis.

There is a considerable literature on diagnostic delay in colorectal cancer and there is growing international interest in identifying systems and strategies for promoting more timely diagnosis and hence earlier stage presentation. Whilst this is an important area of investigation, I have a number of methodological concerns about the paper:

1. There are no clear definitions of patient-related and system-related delay. These forms of delay can be quite challenging to interpret from case note and audit information and it is not clear how these judgements and interpretations were made.

2. The data extraction process is not well described, were there standard pro-formas for example extracting information from case notes and laboratory results?

3. The paper reads very much like an audit. There are other studies with more rigorous methodological approaches which have examined delay and it is not clear how this paper adds to the delay literature.

4. Whilst it is stated that an evaluation was to be made of the association between potential predictive variables and advanced stage, almost none of this information is presented. Further, important statistical considerations such as multiple comparisons are not mentioned.
5. There is very little reporting of the quality and completeness of the various data sources including the progress and nurse notes, imaging and pathology reports etc.

6. The paper has many instances of poor grammar and typographical errors and shouldn’t really be submitted in this state.

7. Many of the results such as the proportion of individuals screened prior to a diagnosis of cancer are difficult to interpret as it’s not clear whether the screening tests themselves prompted the diagnostic process of colorectal cancer or would have been somewhat serendipitous.

8. There is a substantial body of cancer diagnosis delay literature, particularly out with the US, which is largely unreviewed.

9. The conclusions of the study don’t really add to existing knowledge; we already know that there are frequent opportunities for early diagnosis which are missed and there are better estimates of this problem from more methodologically rigorous studies.

My recommendation would be that the paper is revised heavily and its methods tightened. I do believe it will be of more interest to US audiences, and might be better submitted to a US journal; many of the factors measured, particularly those to do with system-related delays have limited interest and applicability outwith the US –

This is particularly so given the paper’s current form which has almost no reference to relevant literature outwith the US.

**Level of interest:** An article of limited interest

**Quality of written English:** Not suitable for publication unless extensively edited

**Statistical review:** Yes, and I have assessed the statistics in my report.