Reviewer's report

Title: A randomised controlled trial and cost effectiveness study of systematic screening (targeted and total population screening) versus routine practice for the detection of atrial fibrillation in the over 65s: (SAFE)

Version: 1 Date: 8 April 2004

Reviewer: Helen Rodgers

Reviewer's report:

General
This is an important study which addresses an important clinical and public health issue - should we screen older people for AF and if so what is the optimum strategy? The group have an excellent and well established repoutation in this area of research. There are many interlinking components to the study.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Opportunistic screening - I think that the authors unintentionally given the impression that detection of an irregular pulse is diagnosistic of AF - the sensitivity is about 90% but the specificity is lower especially amonth the elderly where it is about 70%.

Targetted screening - prescription of digoxin has also been used as targetted screening with a sensitivity of around 50% and specificity of 95%.

I'm unclear how the study would identify incident cases and hence identify the incidence of AF. Surely you'd have to screen the population a send time? I don't think that a GP computer search would suffice.

Secondary outcomes - the measures used should be referenced.

The tense changes between the beginning and end of the paper - this may be appropriate given the stage of the research.

The paper seems to end abruptly is there a way of bringing things together with a final paragraph.

Should timescales and when results should be expected be included?

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Introduction/optimum stategy - there is a large population based study of AF in the UK (ref 14). This should be referenced in sentence 2. I think it would be fair to say that this study also provides an accurate estimate of the community prevalence of atrial fibrillation.
The fact that 15% of strokes are associated with AF is repeated.

Discretionary Revisions (which the author can choose to ignore)

I think that the paper would read better if the information on page 14/15 was earlier within the methods section.

**What next?:** Accept after minor essential revisions

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

**Quality of written English:** Acceptable

**Statistical review:** Yes