Reviewer’s report

Title: The Diagnostic Yield of the first episode of a Periodic Health Evaluation

Version: 1 Date: 27 January 2012

Reviewer: Nynke Van Dijk

Reviewer’s report:

In this study the authors aim to identify the diagnostic yield of a first periodic health evaluation. Although any part of additional information on the value of preventive/ screening services is useful I do have some concerns.

Major compulsory revisions.

My main concern with this study is that the periodic health evaluation as described in this study is a very extensive evaluation with a wide variety in clinical disorders as outcomes. The current conclusion of the paper is that the full (2 hour plus) evaluation is needed to obtain the diagnostic yield presented. Although I agree that for instance Obesity and nicotine abuse are important health problems, they do not require the full PHE as described, but a few, relatively simple questions and measurements can be used to identify these problems. These diagnoses therefore do not require the full PHE. The important question therefore to me is not what the diagnostic yield of the PHE is, but also which components of the PHE are important in making these diagnoses. This would result in a more critical evaluation of this time/ money consuming effort.

The PHE consisted of additional testing, which was, fortunately, partly based on the symptoms, signs and specific situation of the patient. Without knowing which and how many tests were done, we remain unaware of the testing needed to obtain these numbers of diagnoses. The judgment whether the evaluation is worth the investments, in my opinion a major outcome in making decisions on preventive healthcare, remains impossible. Could you describe the additional testing required?

Last, the frequency with which these PHEs should take place is under debate. Although this was the first comprehensive PHE for the included subjects, the information on earlier participation in less extensive preventive programs as information on their health status is missing. This could however provide an important insight in the additional value of this program.

Minor essential revisions.

Introduction:

“Experts have advocated for the delivery of preventive services in the context of ongoing clinical care.3-5 In fact, the delivery of preventive services and screening tests in
the context of a PHE has been used as a rationale for this evaluation.6,7” This part is not clear for non-US readers.

“..testing. 8 The PHE also..” why also?

Methods:

- Could you describe in more detail based on which information data-extraction took place? Were only diagnoses as coded by the physicians included? How did you make sure diagnoses did not already exist (i.e. class III obesity should have been identified earlier?)
- Could you describe in a little more detail which diagnosis were and were not included?
- What was the size of the random sample on which the ICC was based?
- Please add ethical considerations. Patients were asked for their consent I presume?

Results:

- From the paper I do not understand why the description of the population as described in the methods (executive health cohort) differs from that in the results section. Please fully describe the sample used for this study (i.e. including gender).
- Of the 428 new diagnoses, 82% (350/428) were in men and 18% (78/428) in females. Please relate to the size of the male and female population. The diagnostic yield in women seems to be very low. Could any other differences, for instance in age groups, be identified? This is worth considering when advising patients to participate in a PHE. By using multivariate models predicting those patients likely to obtain a clinically significant diagnosis, possibly a selection of patients who optimally benefit from this kind of testing could be made.

Discussion:

- Many statements require additional references, for instance: Page 9 and 10 both second paragraph.
- Page 9 – last paragraph: the sample used for this study, as they are employed, are probably also in better health than the general population, as most ill people do not have the ability to work. How would this affect your results?

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

Quality of written English: Acceptable

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

Declaration of competing interests:
I declare that I have no competing interests