Reviewer’s report

Title: Factors prompting PSA-testing of asymptomatic men in a country with no guidelines: A national survey of general practitioners

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Reviewer: Jane Melia

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This is an important topic and original research which could inform understanding of the reasons why GPs frequently test for PSA in Ireland which in turn must contribute to the high detection rate of prostate cancer.

There are several areas where the authors could improve and strengthen this paper.

Major compulsory revisions

1. The paper lacks references to related research in England and Wales, notably papers by Joan Austoker’s team. This research is relevant given the fact that 49% of the GPs in Ireland were found to have worked abroad mostly in the UK. Considerable emphasis is placed on references from Australia and one reference (37), not clearly described, is on factors related to breast examination.

2. There are many factors besides those of GPs alone which will influence frequency of GP PSA testing: attitudes of local urologists and pathologists, local guidelines, patient demand etc. This should be mentioned in the Background.

3. Although the authors state that guidelines will have influenced use of PSA in other countries, the level of influence varies greatly. For example after the introduction of the Prostate Risk Management Programme in England two studies showed that only about 54% of GPs were actually aware of the programme. Thus other factors are likely to have led to England having overall a more conservative approach to use of the PSA test in asymptomatic men compared with Ireland or the USA.

4. The reasons for appropriate or inappropriate testing will differ for men aged <50 and men aged >75 years (possible error in title of Table 2 as states men >80 – if not why was the cut off changed?) so it seems unwise to group these outcomes together. The test of men <50 should take into account whether or not there is a family history, and it would be possible to analyse this separately in relation to knowledge/awareness of family history collected in the questionnaire.

5. The Abstract needs a little more sharpening and clarity: ‘intensive PSA testing’ could mean a high prevalence of testing in the male population or the frequency with which an individual is tested, inappropriate testing of men <50 should not be mentioned without reference to family history, clarify what the meanings or significance of ‘having a PSA testing policy’ or ‘favouring regular PSA testing’ are in relation to inappropriate testing, ‘despite scientific evidence to the contrary’ is
wrong – there is no conclusive evidence either for or against PSA screening, and last sentence is rather vague given some of the interesting data collected.

6. In the Methods more information is needed on the questionnaire either in an appendix or table particularly to assess the validity of right and wrong answers to PPV (the cut off is only given in Table 1) and knowledge of prostate cancer and PSA testing.

7. Useful descriptive information could include how many pathology laboratories measure PSA in Ireland or the number of urology departments to which men would be referred, and the distribution of number of GP per practice.

8. The section on Statistical Analyses should include a statement on the power of the analyses to analyse this large number of variables in multivariate regression with a sample size of 1497. There is also no mention of confounding between variables – were all these factors truly independent and were there no interactions?

9. In the Results it would help to have a table summarising the frequency of characteristics, levels of knowledge etc and thus reduce the descriptive text. Under Information needs, what were ‘the topics’ – again a table may have helped.

10. Was the inclusion of all variables in the regression analysis of Table 1 (dependent variable ‘propensity of GPs to testing asymptomatic men’) hypothesis driven? If so, it is unclear why Frequency of PSA testing and Inform patient prior to testing were included. These are more related to characteristics of clinical practice for PSA testing than factors influencing the decision whether or not to test. Table 1 has a lot of information and may benefit from being split into two parts with the regression results presented separated.

11. In the Discussion,
a. The first sentence should mention Ireland

b. The paper must recognise that PSA testing is not the only cause of the rise in detection rates of prostate cancer: aetiological factors, and biopsy practice, and pathological examination of prostate tissue whether from TURP or from biopsy must also be mentioned.

c. The authors have a tendency to use their results to make statements about the causes of certain associations when in fact they can only make indirect assumptions eg ‘younger GPs, those involved in research…were more likely to be guided by the published evidence’ – the authors did not actually present any data on whether GPs were influenced by published evidence, and similarly ‘these beliefs were sincerely held’……….’ and ‘unlikely to be due to either patient demand…’.

d. ‘attendance at meetings on PSA’ – this is particularly interesting – who organised the meetings, which specialities were present, and what information and messages were given about PSA testing?

e. A limitation is that fact that there were no data on the influences of urologists, pathologists and patients.
Level of interest: An article of importance in its field

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