## PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (<u>http://bmjopen.bmj.com/site/about/resources/checklist.pdf</u>) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below. Some articles will have been accepted based in part or entirely on reviews undertaken for other BMJ Group journals. These will be reproduced where possible.

# ARTICLE DETAILS

TITLE (PROVISIONAL)	Preventive health services implemented by family physicians in
	Portugal - a cross-sectional study based on two clinical scenarios
AUTHORS	Martins, Carlos; Azevedo, Luís; Santos, Cristina; Sá, Luisa; Santos,
	Paulo; Couto, Luciana; Costa-Pereira, Altamiro; Hespanhol, Alberto

## **VERSION 1 - REVIEW**

REVIEWER	Carlos Brotons Sardenya Primary Health Care Center. Biomedical Research Institut
	Sant Pau. Barcelona. Spain
REVIEW RETURNED	03-Apr-2014

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GENERAL COMMENTS	Instruments and methods
	Page 6, line 56: mammography, breast cancer exam, cytology do
	not apply to a 52 year-old male.
	Statistical analysis
	Authors should mention the analysis of concordance of FP with
	USPSTF's recommendations, which is different to the score from 0
	to 100, also performed and explained.
	Table 5: it is not well understood what the % means, because the
	simple size is clearly different depending on the preventive activity. It
	seems that tetanus and FOBT are also larger than 90%, but they are
	not mentioned in text (page 10, lines 24-25).
	Table 6 should include the year of each recommendation because
	they differ since there have been different updates published.
	Discussion
	It is discussed the difference with regard to the concordance with the
	cholesterol recommendation in the male and female clinical cases.
	Authors should mention that this is and old recommendation,
	published in the year 2008, and the update will probably change, as
	it has been change in other recent guidelines. Therefore, the
	response is not aligned with the USPTSF recommendation, but the
	answer is probably correct. These results could be misleading.
	Also, authors should mention that the way the concordance with
	USPTF recommendations using a score between 0 and 100 it is not
	very objective and some bias might have been introduced.

REVIEWER	Jose Augusto Simoes USF Marquis of Marialva - ACeS of Baixo Mondego
REVIEW RETURNED	Portugal 06-Apr-2014

GENERAL COMMENTS	Correct on page 6, masculine setting, interventions mammography, breast physical exam, cervicovaginal cytology, because they are not in accordance with Table 3.
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REVIEWER	Paulo Duarte Vitória Faculdade de Ciências da Saúde da Universidade da Beira Interior
REVIEW RETURNED	08-Apr-2014

GENERAL COMMENTS	This is an interesting paper aimed to assess if Portuguese family physicians are performing preventive health services in accordance with scientific evidence, based on the recommendations of the United States Preventive Services Task Force (USPSTF). The relevance of this issue is high regarding the importance of preventive interventions in the quality of the primary health care services. Overall, the results suggest that the family physicians are performing well, but this performance should be improved in some issues that the paper point out and that should be addressed in the family physicians training at pre and post graduated level. I have only one suggestion: the sample characterization and the
	I have only one suggestion: the sample characterization and the reporting of the responding rate will be better placed in the methods section that in the results section.

REVIEWER	John Yaphe Community Health School of Health Sciences University of Minho Braga, Portugal
REVIEW RETURNED	08-Apr-2014

GENERAL COMMENTS	This paper reports the results of a survey of a sample of primary care physicians in Portugal regarding their self-reported use of preventive and screening measures. It used two case vignettes of a healthy adult male and female patient and examined the degree of agreement with USPTF recommendations by age and gender. Agreement was found to be high except for recommendations for PSA screening in men and cholesterol screening in women. Younger physicians did better than older ones in this sample. As such, this study contributes to or knowledge of self-reported
	preventive behaviours among family doctors in Portugal. The findings may be relevant to health administrators and educators helping doctors to reach performance targets. However the study and the report suffer from some limitations and deficiencies that need to be addressed before this report can be considered ready for publication. Abstract
	The abstract presents a brief, accurate description of the objectives and main findings of the study. A description of the study design is also needed. There are errors in English usage ("we found" should replace "we verify"). Several clumsy expressions need to be corrected. For example, "Our study shows high rates of prevalence of Portuguese family physicians saying they should perform and reporting regular application of most of the preventive interventions recommended by the USPSTF" might be written simply as "We found a high degree of agreement with USPTF recommendations among Portuguese family physicians." The paper should be given to a native English speaker for further editing.

## Introduction

The introduction presents a brief account of the history of periodic health examinations and screening tests. It also discusses some of the dangers inherent in routine screening. I would prefer an introduction that begins with a simple sentence saying what the study is about, what the current problem is, and what this study adds. A brief historical review is then warranted. However the authors ignore the literature from Portuguese general practice on prevention. There are publications on cancer screening, maternal and child health, and screening for cardiovascular risk factors that define this problem in the Portuguese context. These are also absent from the discussion. This needs to be addressed.

### Method

The method is clearly described. The study used the questionnaire from Broton's 2005 EUROPREV study and this is acknowledged. The exclusion and inclusion criteria for participation are described. The sample size calculation is adequately described and is correct. Data collection methods and data quality assurance methods are described in detail. The statistical methods chosen were appropriate. Ethical approval was obtained.

#### Results

The study population is adequately described (age, gender, seniority, practice setting, geographic region). There was a high response rate.

The results of the key outcome variables are presented in the text and in tables. Results are analysed by age, gender and practice location.

It is customary to present the description of the study sample in Table 1. The authors have chosen to present the sampling frame by regions in the first table and then describe their subjects in table 2. The authors may want to switch these tables. Tables 3 and 4 are quite dense with information, presenting the results of each study question stratified by age group, gender and practice location. Perhaps this can be simplified. Table 5 is a simpler summary of this information. Table 6 presents the USPTF recommendations, which is helpful and Table 7 presents the degree of concordance with recommendations.

In presenting the results of the statistical tests, the authors give the odds ratio and a p value. It is preferable to present the confidence interval around the odds ratio so that readers may judge the importance of this observation.

### Discussion

The discussion is verbose and can be shortened. For example, the first half of the first sentence of the discussion should be deleted ("If we take into account the objective of this study, we can say that, in general...") leaving only the second half of the sentence, which is what the authors really wanted to say ("Portuguese family physicians have (a) high (degree of) concordance with USPSTF recommendations.")

The discussion falls short in its assessment of internal and external validity of the study. While the authors used an existing questionnaire, they barely touch on the problem of social desirability in the responses they received. Perhaps Portuguese family doctors (especially the recently trained ones) are good at reporting what is expected of them with regard to preventive services.
Presenting findings from other recently published studies on prevention in primary care could have strengthened the discussion. There are data available on blood pressure measurement, colon, breast and cervical cancer screening, smoking cessation advice, alcohol abuse counselling and obesity counselling in Portugal. They support the authors' contention that Portuguese GPs practice what they preach regarding prevention. The authors are advised to look for this material and quote it. Comparison with findings from other countries in Europe would also be of interest.
A striking deficiency in the discussion is the absence of the discussion of the findings in the light of recent primary care reform in Portugal. The formation of Family Health Units with contracts that include pay-for-performance targets for preventive services has had huge effects on practice. These data are also available. The authors have the opportunity to make a positive statement about primary care reform (if they support it) but they have not done so.
The authors' concerns about medicalization, including over- diagnosis and over-treatment, are warranted.
Summary
This paper addresses a relevant and interesting topic in primary care. The study was well designed and well executed. The paper suffers from a number of important deficiencies that need to be corrected before it can be considered acceptable for publication.

REVIEWER	Filipe Prazeres Faculdade de Ciências da Saúde Universidade da Beira Interior Portugal
REVIEW RETURNED	12-Apr-2014

GENERAL COMMENTS	Some sentence structure changes required. Please ensure that the manuscript is proofread by a native English speaker.
	Title: I would find preferable to change the title as following "Family physician's preventive services in Portugal - a cross-sectional study based on two clinical scenarios"
	Introduction:
	Page 3, line 11 "realization" should be "implementation" ?
	Page 3, line 50 Should be amended. For example: Several studies indicate that health professionals, despite having access to updated evidence- based recommendations, continue to implement interventions whose

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effectiveness is not proven.
In the introduction please place Portugal in the preventive services recommendations context, including Ministry of Health recommendations. Please also explain why have you decided to follow USPTF recommendations and not others.
Given the aim it is worth looking at: JAMA Intern Med. 2013;173(5):371-372. doi:10.1001/jamainternmed.2013.3187 and further stress the importance of preventive services.
Methods: Page 4, line 46 Should be amended. For example: Each Primary Health Care Unit was a cluster and one third of the family physicians were randomly selected per unit.
Page 6, line 53 It is not clear to me why did the author asked about mammography, clinical breast exam and cervicovaginal cytology in a male clinical scenario?
Page 6, lines 53 to 57 "a blood test for a check of cholesterol levels" should be "a blood test for determination of serum cholesterol levels"? "fast glucose" should be "fasting glucose" "breast physical exam" should be "clinical breast exam"? Please change throughout the manuscript.
Page 7, lines 3 to 8 "quit smoking advisement to smokers" should be "advisement on smoking cessation"? "advising risky drinkers to reduce alcohol consumption" should be "advising to reduce risky drinking" ? Please change throughout the manuscript.
Page 7, line 27 Please explain how was reference no. 13 questionnaire adapted to your study?
Page 7, line 42 Please explain how this score was built.
Page 8, Table 2 Please remove "sample characteristics" from the table
Page 9, Table 2 "for fewer than 2 years" should be "for less than 2 years"
Page 10, line 7 Please use same verbal tense in the results section. The author used "we verify" and previously used "we observed".
Page 12 and 13 Table titles should be changed, in my opinion the term prevalence should not be used. Use the term GP or Family Physician, please do not use both.
Discussion: Page 18, lines 7 to 18

Using your data I would advise you to analyze if Portuguese recommendations were followed by Portuguese family physicians or not.
Page 19, lines 2 and 3 Needs rephrasing since the meaning is lost.

## **VERSION 1 – AUTHOR RESPONSE**

## **Reviewer Name: Carlos Brotons**

We have improved the explanation of the score and we have updated table 5 trying to inform better the meaning. We have added the following statement on the USPSTF recommendations Table's title: (according to online version available on 2013 March 28). We have clarified: "Rural and urban work setting were considered to be as self perceived by family physicians. "

### Reviewer Name Jose Augusto Simoes

Correct on page 6, masculine setting, interventions mammography, breast physical exam, cervicovaginal cytology, because they are not in accordance with Table 3.

It's done - thank you!

## Reviewer Name Paulo Duarte Vitória

Thank you very much for your comments. We have followed the STROBE Statement, considered to be a standard of quality in the reporting of observational studies. According to the STROBE Statement, the characteristics of study participants and the report of the numbers of individuals at each stage of study shall be placed in results section. If possible, if you don't mind, we would like to let it as it is.

### Reviewer Name John Yaphe

We have added the study design at the abstract - thank you! We have changed the expressions/sentence following your suggestions. The paper has been submitted to English a professional editing service before it was submitted - "American Manuscript Editors". And it was edited by a native English speaker. We have added Portuguese literature in the Introduction and in the Discussion. We have added in two paragraphs the confidence intervals around the odds ratio. We have added in the discussion: remarks regarding external validity, social desiability, reference the impact of the primary care reform in Portugal and some other Portuguese data /results.

### **Reviewer Name Filipe Prazeres**

We have changed the title and most of the English suggestions you have made. We have added Portuguese literature in the Introduction and in the Discussion. We have added the explanation why we have used USPSTF recommendations. We have added an explanation about the building f the score. We have updated the tables' titles.

# **VERSION 2 – REVIEW**

REVIEWER	John Yaphe School of Health Sciences University of Minho
	Braga, Portigal
REVIEW RETURNED	27-Apr-2014

GENERAL COMMENTS	I have had the opportunity to review the paper of Martins et al. after revisions by the authors. The paper appears to be significantly improved.
	There are still a few minor errors that require correction.
	In line 26 on page 5, the term "National Service" should read "National Health Service".
	In line 47 on page 18 the word "being" should be removed.
	In line 36 on page 20 the word "here" should be "there".
	I am pleased to see that the authors have included comments about primary health care reform in Portugal and its effects on prevention.
	The references to other published studies on prevention in Portugal are welcome.
	The comment on social desirability effects in the discussion is a good addition.
	I also like the new titles for the tables.

REVIEWER	Filipe Prazeres Faculdade de Ciências da Saúde Universidade da Beira Interior Portugal
REVIEW RETURNED	26-Apr-2014

GENERAL COMMENTS	The authors have successfully improved the manuscript.