Reviewer's report

Title: Screening premorbid metabolic syndrome in community pharmacies: a cross-sectional descriptive study

Version: 1 Date: 20 February 2014

Reviewer: Sandra Benavides

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Major Compulsory Revisions:

Background, second paragraph: The authors begin to describe “premorbid metabolic syndrome” and then switch to only discussing metabolic syndrome. The author should clearly describe the differences (if any) between the two. Also, if the term “premorbid metabolic syndrome (pre-MetS)” is defined somewhere, the authors should provide the citation. Based on how premorbid metabolic syndrome is described later, I don’t think it is necessary to refer to it in this manner for the paper.

I am confused with the specific aim, “…for measurement of any of the five risk factors”... sounds as if they went to the pharmacy specifically for analysis and “detect the presence of other risk factors” (such as what? Are the authors trying to identify metabolic syndrome? The specific aim is unclear. Which interventions did the pharmacists conduct?

Methods, design: delete “premorbid”

How did patients know that they could be screened? What was the recruiting process? These details must be provided.

How were the pharmacies selected for inclusion? What is meant that the pharmacies received accreditation by the University of Barcelona?

How was the presence of the exclusion criteria verified? Diabetes? Pregnancy? CV episode (MI only or does angina count? What about stroke?) What cognitive tests were done to ensure they understood the study?

I don’t understand the need for a sample size in a prevalence study? Perhaps an additional biostatistician should review.

Were all the pharmacists trained on obtaining the information and anthropometrics?

If the authors were determining the prevalence of metabolic syndrome using the five listed criteria, why was it necessary to obtain all the information they obtained (including smoking, physical activity?)

Were the medications verified in the pharmacy system or only self-report?

Please indicate exactly what the authors were comparing in the statistical analysis as that is not clear.
The specific aim indicates that the pharmacy intervention was obtained, that is not indicated in the methods, please clarify in methods or remove from specific aim.

For the results, if the figure details reasons for non-enrollment, no need to restate in the manuscript.

It is not clear why the authors used confidence intervals in the results rather than mean and standard deviation. The CI makes no sense. Would recommend changing to include means and standard deviations.

The table indicates a significant difference in BMI between men and women but the paper states there is not. Please rectify.

As I read through the paper, it seems as though it would have made more sense to just exclude anyone who already had dyslipidemia or hypertension to make sure you had a population that was at risk for development of these diseases.

The results in Table 2 and 3 are obvious; those with metabolic syndrome are going to have more obesity and higher rates of using medications. These tables can be deleted as well as the text. Also, the statistical analysis makes no sense. Table 4 is of some use, but doesn’t provide any significant findings. It should be deleted. Also, table 5 does not add much either.

In figure 2, what are the 2 different numbers on each graph representative of?
Delete figures 3-6. They don’t provide any interesting data. Of course, it is to be expected that those who have a larger BMI will be obese and meet criteria for metabolic syndrome.

Discussion: This is a very small sample size that may not be representative of the general population and it is difficult to determine the true prevalence. The authors must describe how the patients were selected or how they came to find out about the screening.

Were the subjects compensated?

In the conclusion, the authors indicate that most (50.2%) of the patients were healthy and did not receive medications. How many of these patients met criteria for metabolic syndrome. Determining this number will justify the use of a community pharmacist more than anything else.

Even though the authors present information on physical activity and other risk factors, there is no analysis to determine how we can capture these patients prior to the development of metabolic syndrome. Those data analysis would have been helpful to community pharmacists to determine who to target for interventions.

Please provide any other discussion on literature on the use of pharmacist in the community setting to screen for various diseases. This is absent in this paper.

Please provide limitations in your study.

Revise abstract to reflect changes in the manuscript.

Discretionary Revisions
Background, Line 3: Change “doctors” to physicians.

**Level of interest:** An article of importance in its field

**Quality of written English:** Needs some language corrections before being published

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

**Declaration of competing interests:**

I declare that I have no competing interests