Reviewer's report

Title: Socio-demographic determinants and access equality to prenatal care in Italy

Version: 2 Date: 21 May 2013

Reviewer: Katrien Beeckman

Reviewer’s report:

This is a very interesting study on a beautiful dataset, the comparison over the years are very interesting and hopefully accessibility can further augment over the coming years. However I have some questions for the authors about their manuscript.

- Major Compulsory Revisions

The author must respond to these before a decision on publication can be reached. For example, additional necessary experiments or controls, statistical mistakes, errors in interpretation.

1. In the introduction it is said … ‘on the adequate prenatal care utilization (APNCU)’

This is not the correct explanation of what APNCU stands for and I believe this term needs some further explanation, because adequate prenatal care is defined in various ways throughout the different indices.

2. I wonder if the part starting from including APNCU in the analysis shouldn’t be included in the methods section as the authors start to explain what data were merged and computed etc

3. Peristat does not recommend to count the number of visits! Therefore I believe it is wrong to say that the number of prenatal visits was an indicator chosen, following PERISTAT health care indicators…. Peristat only describes the timing of the first visits and the content of visits (this indicator however needed further development) as indicator for health care services. This needs to be adopted in the text. We need to understand the choice for the cut of at 4 visits during pregnancy.

4. The link between number of visits and inadequate antenatal care use is not made clear. In their aims the authors focuses on late and inadequate care, late is later defines as 12 weeks, or this can be assumed but no link between inadequate and less than 4 visits is made. In the result section it is mentioned… that guidelines say to make at least four visits annually… shouldn’t this be pregnancy?

5. To me it is unclear if the data on initiation of care and number of visits are
included in SCLB as the authors state that ‘These certificates provide information on the health, epidemiological, and socio-demographic characteristics of women through the registration of birth events, including causes of mortality and possible malformations of the newborn…nothing is said about antenatal care

6. In the methods section (2.2) results on the first research question are given, even before the statistical methods (2.3) are described

7. In the methods section the authors shortly describe the regional efforts to inform pregnant women, these efforts included ‘… to follow the prescribed guidelines…. ‘ Do these guidelines advice 4 visits? And initiation of care before 12 weeks of gestation? This link is not clear.

8. I do not know why the model of Andersen and Newman is introduced while it is not represented in the analyses or included in the discussion

9. It is very interesting to see that the use on antenatal care, measured on 2 parameters increased during the years, however I wondered if also social inequalities reduced over the years. (it might be that I didn’t understood this properly caused by the statistical language)

10. About the discussion section; the second sentence states: Younger women, poorly educated, unmarried, and those outside of the labour market have a higher probability of an inadequate use of PNC… while before at no time inadequate use for this study is defined, the authors examined the receiving of 4 visits or late initiation, what is inadequate here: one or both variables scoring negative?

11. It is not clear for what time period the campaign to promote antenatal care use was ongoing in Italy from 2005 until…? I do not see any critical reflection on the need to repeat or continue this campaign, effects may fade after some time

12. The link between access and number of visits in this study with quality of care and multidimensional care in general, described in the last paragraph is not completely clear to me, this should be framed in another way

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

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

'I declare that I have no competing interests'