Reviewer's report

**Title:** Prevention of non-communicable disease in a population in nutrition transition: Tehran Lipid and Glucose Study Phase II, Rationale & Study Design

**Version:** 1  **Date:** 10 January 2008

**Reviewer:** Patricia Risica

**Reviewer's report:**

This is an interesting, and exciting report of a large longitudinal study of cardiovascular disease risk among residents of Tehran, Iran. This paper is well written, with numerous attributes, including very detailed description of the measurement methods. However, some scientific details are not delineated sufficiently. In addition, editing of several minor wording and language limitations would improve the paper.

Specific scientific recommendations for this paper are as follows:

* Details on the sample selection: the authors describe a selection of 15005 individuals over 3 years who were residents (not residence) of District 13, and under the coverage of 3 medical centers. This description does not describe the representative nature of this sample. What proportion of the population uses the clinic? How was this group selected? Was the selection random? What were other exclusion criteria (other than < 3 years of age)? What proportion of selected individuals declined to participate, were excluded for another reason or were not able to be contacted? Also, it seems later in the paper that the participation was at the household level rather than as individuals. How was household status factored into selection of participants and is it planned to be accounted for in future statistical analyses? Details of how participants are/were selected for intervention(s) should also be explained including the characteristics of the intervention participants that do or do not match the overall community. A flow chart starting with the overall community showing all sampling processes and ending with the overall sample would be helpful. Table 2 needs to be expanded to show the overall demographic characteristics of the participants, and would be strengthened by showing also the demographic characteristics of the overall Tehranian or even District 13 population.

* Mention comparison community: in the Lifestyle Interventions section and table 2, a very brief description is mentioned of proximity (or distance) of District 13 to community(ies) used as comparison. This aspect of the study - the selection and operational definition of one or more comparison communities, should be much more fully explained in the text.

* More detail on the specific interventions are needed: The content of intervention(s) is very thin. The content, framing, and intensity should be explained in considerable more detail. (e.g. what constitutes "healthy nutrition messages"?, how were these messages deliverd (sensitivity to cultural or other
differences among the population), and how much volume and with what frequency were messages delivered?) The consistency of messages among dietitians should also be described as well as other process data such as length of clinical encounters, attendance, etc.) This is especially important as adult and child populations are combined in this set of interventions.

Minor editing suggestions, while not comprehensive, are as follows:

* Choose either the present or past tense. Though the study is ongoing, the authors seem to be reporting the events of planning and early implementation of the study, so past tense may be most appropriate.

* The abstract (line 12, sentence beginning Design & Methods in phase II) is a confusing description of what seems to be the sample size calculations conducted prior to initiation of the study. It is unclear what a 5% design effect refers to, and overall unnecessary to include this detail, especially in the abstract.

* Abstract line 17, sentence beginning "Officials of varions sections. . ." should replace sections with sectors.

* Introduction: Overall this section is very good. Some of the level of detail about Iran may be more than necessary (e.g. GDP, literacy rate and population density?), especially without citation.

* Table 1 should be written as a short paragraph review of previous studies within the introduction, not as data presented.

Thank you for the opportunity to review this paper. With revision it is likely to describe a very important study, which will be a contribution to the literature on cardiovascular disease.

**What next?:** Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

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

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

**Statistical review:** No, the manuscript does not need to be seen by a statistician.