Reviewer’s report

Title: Cardiovascular Disease Risk Factors and Socioeconomic Variables in a Nation Undergoing Epidemiologic Transition

Version: 1 Date: 22 May 2013

Reviewer: Garry L Jennings

Reviewer’s report:

This is an important study and the results of this survey will be useful in informing public health policy in Malaysia.

Major compulsory revisions:

The discussion should be expanded to cover strengths and limitations of the study in a little more detail. The strength is the number of subjects surveyed, the standardised techniques and the geographical and cultural breadth of the study population. However some discussion is needed on how generalisable this sample is to the Malaysian population. The ethnic mix of participants does not reflect that of the entire population of Malaysia and is dominated by Malays. This leaves relatively small numbers of Chinese, Indian and other racial groups in some of the categories when the study population is broken down. There is quite a significant number of ‘low income other’. I presume these are aboriginal Malaysians or other special groups and some comment on the special nature of these groups would be worthwhile.

Another issue relates to the cross racial comparison of obesity. A body mass index of 27.5 was chosen as a cut off but there is other evidence for example that lower levels are more appropriate for Chinese subjects.

Minor essential revisions:

In the table legends it is stated that numbers in brackets are P values. It is not clear what comparison these P values relate to. Cholesterol and glucose cut off are referred to as ‘mean’, but I expect these are taken from a single measurement so are not really means.

Discretionary revisions:

The report could be improved by adding information on any co-morbidity that was recorded in the population. As referred to above, breaking the groups down into so many categories for comparisons with education, income, age, racial groups, urban and rural introduced a lot of noise into some categories. From a public health point of view it is more important to consider overall risk and future burden of disease than single risk factors. It might be possible to choose an appropriate method of calculating absolute risk given the data available from this survey. If not, even comparisons of people with one, two, three or more cardiovascular risk factors would be helpful in helping understand the significance of the individual
risk factor data reported.

Finally, was the measurement of blood pressure standardised across the population? It would be useful to state this either 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