Reviewer's report

Title: Status and perspectives of hospital mortality in a public urban Hellenic hospital, based on a five-year review.

Version: 1 Date: 9 September 2007

Reviewer: Tsung-Hsueh Lu

Reviewer's report:

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

There are three traditions in studying MORTARITY. For public health tradition, the denominator of mortality is the mid-year population of a country or region and the nominator is the number of deaths from general population at risk. In this tradition, the mortality is an indicator of population health and has been used for monitoring the health problem, identifying the priorities, and evaluating the health policies or programs.

For clinical cohort tradition, the denominator of mortality is the person-years of patients of certain disease and the nominator is the number of patients died. More precisely speaking, this kind of mortality is case fatality rate or survival rate. The typical study designs are the clinical trials or prognosis studies. Sometimes the investigators used standardized mortality ratios (SMR) for those patient cohorts with small number of cases.

For the third tradition, in hospital mortality has often been used as an indicator quality of healthcare. The denominator of in hospital mortality is the number of patients received certain kind of procedures (e.g., surgery or PTCA) and the denominator is the number of patients died in the hospital after receiving the procedures.

The present study calculated two kinds of hospital mortality rates. The denominator of the first one was number of all death (i.e., proportional mortality rate). The denominator of the second one was number of discharge of certain diagnosis or in certain department. Throughout the article, the authors "mistakenly" interpreted the hospital mortality differences as population mortality differences.

It's a wrong statement in background “evaluation of hospital mortality is an important source of information concerning the status of the cause of death and their variations in place and time, and thence for substantiation of health care priorities, the evaluation of infrastructure developments…” (Page 5, the first paragraph, the third sentence)

Using only data of one hospital is a serious biased estimation of mortality pattern of general population. As indicated by the authors “The reduction of number of
deceased which was observed throughout the years 1997-1999 coincides with
the establishment of a new general hospital in this region” (Page 14, the third
paragraph, the first sentence), the changes in patterns of causes of death were
seriously affected by changes in delivery of healthcare services outside this
hospital which accommodates only 17.8% of the total beds of this health care
region (Page 13, the first sentence).

In terms of the limitation of the data the authors have, I suggest the authors of
this study to focus on the mortality of certain procedures, i.e., the third tradition of
mortality study, which would be more robust and would be less sustaining the
selection bias.

----------------------------------------------------------------------------------------------------------------------

Minor Essential Revisions (such as missing labels on figures, or the wrong use of
a term, which the author can be trusted to correct)

Please add more accounts on how the coders disagreed on the interpretation of
International Selection Rules for underlying cause of death, especially the Rule 3.

How are the differences between patterns of causes of death distribution in this
hospital compared with official published regional patterns?

Is ‘nosocomial’ coders a misspelling of ‘nosological’? (Page 14, the second
sentence)

What next?: Reject because scientifically unsound

Level of interest: An article of insufficient interest to warrant publication in a
scientific/medical journal

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.