Author's response to reviews

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

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Version: 4 Date: 23 December 2007

Reviewer's report

Title: Status and perspectives of hospital mortality in a public urban Hellenic hospital, based on a five-year review.
Version: 3 Date: 17 November 2007
Reviewer: Tsung-Hsueh Lu
Reviewer's report:
General
The revised manuscript is much more appropriate in interpreting the proportional mortality.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
1. Can the authors add one more information, i.e., the time interval between date of discharge with date of death? Were there many people who discharged from the hospital and died one month later without visiting the hospital? In most countries the death certificates of these deaths should be issued by medical examiners or coroners, how are the situations in Greece? Similarly, can physicians in the hospital issue death certificates for those died from unnatural deaths (external causes of death)?

Reviewer's report
1. Can the authors add one more information, i.e., the time interval between date
of discharge with date of death? Were there many people who discharged from the hospital and died one month later without visiting the hospital?

Authors' response
The study included only in-hospital mortality. The one-month post-discharge mortality is not known.

The authors in page 13 under the subheading `limitations¿ section added the following:

`This study was focused on the in-hospital mortality, but the one-month post-discharge mortality rate of those who left the hospital alive was not known.¿

Reviewer's report
In most countries the death certificates of these deaths should be issued by medical examiners or coroners, how are the situations in Greece?

Authors' response
Physicians who are convinced for the cause of death can issue the death certificate. If not, they are obliged to refer them to the Forensic medical examiner.

Please see page 6 section `Methods¿ the third paragraph under the subheadings `Aims, design and settings¿ the paragraph:

`In Greece, there is a legal obligation for a medical professional to certify death, to complete the international form of death certificate, which is recommended by the World Health Organization (WHO) [2], and to refer the deceased for autopsy and death certification when the cause of death is not clear.¿

Reviewer's report
Similarly, can physicians in the hospital issue death certificates for those died from unnatural deaths (external causes of death)?

Authors' response
When violence / unnatural / external cause led a patient to the hospital, physicians are obliged to inform the police office as well as the Forensic Medical Examiner for assessment while the patient is alive. The physician in the hospital who takes care for a patient and has evidence for the cause of death can issue the death certificate. Physicians who cannot certify the cause of an unnatural death are obliged to refer victims for necropsy.

Please see the authors' comments in the `Discussion¿ section page 15 under subheadings `Problems related to death certification¿.

`In this hospital, the annual autopsy rate (7.1 to 9.9%) for those who receive in-hospital care should be increased if it is going to be used for systematic audit,
while the high autopsy rate (34.5% to 40.8%) of those who were dead on arrival or died in the accident and emergency department is a subject of further research that may reveal useful information. Substantial improvement of the infrastructure is required to meet the needs of systematic audit by necropsy.IÓN

Reviewer's report

2. I am not very comfort about the multiple step regression analysis. It's confusion to use ICD-10 chapters as exploratory variables to predict length of hospitalization time. I suggest delete of this analysis and delete table 5 and Figure 3 because this study is not a study assessing factors affecting the hospitalization time. It's another important management issue.

Authors¿ response

The authors agreed that this subject merits its own analysis and deleted this analysis and the associated Table 5 and Figure 3.

Reviewer's report

3. Table 1, it's not necessary to have such detail of age groups which would make the presentation too complicated and overload the readers. The same is for Table 2, Table 3 and Table 4. It is authors' important job to digest and extract the results and presented the most important information to audience. One practical suggestion is to group those categories with small number of deaths. Remember that you are presenting results to international readers instead of to the managers or doctors of your own hospitals. Readers will not care some trivial information.

Authors¿ response

With respect to Table 1: The authors believe that detailed gender and age distribution may help future comparisons and wish to retain the Table 1 as it is.

With respect to Table 2: The authors agreed with the reviewer and grouped specialties with low death rates.

With respect to Table 3: The authors agreed with the reviewer and grouped the distribution of deaths from the time of admission.

With respect to Table 4: The authors believe that includes a core of data suitable for future comparisons and wish to retain it in this structure.

Reviewer's report

4. In the same token, it's not necessary to have such systematic and meliculous discussion of each chapter of causes of death. Please focus on only some
causes of death of particular implications not only to readers of Greece but also to readers from other countries.

Authors’ response
Indeed, the authors reviewed the Discussion section which compares the finding of the study with other published data but more essentially explored and substantiated the existed needs and indicated means and polices for upgrading the health care system. The authors believe that the section has been further improved.

Reviewer’s report
5. Figure 1 could be deleted. I did not see any discussion on seasonal variation of deaths. It’s another topic with long list of papers and it’s beyond the scope of this study.

Authors’ response
With respect to (former) Figure 1 the authors agreed and deleted the Figure 1 and the relevant comments.

Reviewer’s report
6. I suggest of separate Figure 2 into two figures. One for chapter IX, II, IV with high number of death and another for X, XI, XIV, XX with low number of death. Readers could not see any changes by age for those cause of death with small number of death. The authors can also consider of grouping the age groups.

Authors’ response
The authors agreed and separated the data in two figures (Figure 1 and Figure 2).

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

Reviewer’s report
7. It’s not necessary to have arrows in Figure 2.

Authors’ response
The authors agreed and deleted the arrows.

Reviewer’s report
8. There are too many references and many of them did not very relevant to this study. Please try to focus on only small number of important issues.
Authors¿ response
The authors reviewed the discussion and have shortened the references from 37 to 35.

Discretionary Revisions (which the author can choose to ignore)
What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions
Level of interest: An article whose findings are important to those with closely related research interests
Quality of written English: Acceptable
Statistical review: Yes, and I have assessed the statistics in my report.
Declaration of competing interests:
'I declare that I have no competing interests'

SECOND REVIEWER¿S REPORT
Reviewer¿s report
Title: Status and perspectives of hospital mortality in a public urban Hellenic hospital, based on a five-year review.
Version: 3 Date: 19 November 2007
Reviewer: Robert Anderson
Reviewer¿s report:
General

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

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
The paragraphs added by the authors with regard to renal failure and heart failure are helpful, but are not quite sufficient to explain to the reader the problems with using the underlying cause of death in this context. I think a more general paragraph in the methods section is needed at the end of the data source and measurement subsection. This paragraph needs to say something to the effect that focus on the underlying cause may result in the underestimate of medical conditions (such as heart failure and renal failure) that are extremely
important from the standpoint of hospital care, but that are often the result of some other underlying cause (such as hypertension or diabetes). In other words, it is often the complications of the underlying cause that are treated at the hospital and not the underlying cause itself. It is important to understand how these complications relate to the underlying cause and to calculate their frequency "in order to produce evidence for upgrading health care (p. 6)."

Authors' response
The authors agreed and added the following phrase in page 7 under the subheading data source and measurements.

Death certificates were a source of structured data available in electronic form. However, focusing and classifying deaths by the underlying cause results in the underestimation of diseases that are extremely important for assessing the workload and the status of the hospital care when the intention is to produce evidence for upgrading health care. For this reason additional analyses with respect to relative frequencies of common diseases for which the patients were actually treated in the hospital such as, diabetes mellitus, hypertensive diseases, cardiac failure, renal failure, acute tubulo-interstitial nephritis, influenza and pneumonia as well as sepsis, septicemia and septic shock were performed.