Author's response to reviews

Title: Management of environmental health issues for the 2004 Athens Olympic Games: is enhanced integrated environmental health surveillance needed in every day routine operation?

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Author's response to reviews: see over
Larissa November 15, 2006

To: The BioMed Central Editorial Team

Re: “Management of environmental health issues for the 2004 Athens Olympic Games: is enhanced integrated environmental health surveillance needed in every day operation?” MS 9571215261080330

Dear Editor

We are pleased to submit a revised manuscript for your consideration. We have made every effort to modify our manuscript according to the editors’ and reviewers’ comments.

Below please find a point-by-point response to the comments provided. In addition, we tried to format our paper in order to conform to the manuscript formatting checklist as requested.

Sincerely,

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Response to Reviewers’ Comments

Reviewer’s report
Title: Management of environmental health issues for the 2004 Athens Olympic Games: is enhanced integrated environmental health surveillance needed in everyday routine operation?
Version: Date: 11 October 2006
Reviewer: Pierre Gosselin
Reviewer’s report:
General
An interesting paper with many qualities. It is clear, shows some interesting results and brings good suggestions for environmental health surveillance in similar contexts and countries.

We would like to thank the reviewer for the very useful and constructive comments

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

Summary, p. 2: In the results section, it should be stated that the overall decrease trend is over time.
We would like to thank the reviewer for giving us the opportunity to clarify this issue. We added in the results section of the summary the phrase “over time”.

Methods, p. 6: While the A-B-C grading system for the 17 different inspections is mentioned, no explanation on the underlying criteria for these grades is presented nor does reference (9) provide any.
We would like to clarify that reference [9] ([12] in the present version) includes two examples of standardized forms in the appendixes section. We added the references [13] and [14] which include a more detailed explanation of the criteria used in the grading system.

Methods, p.7: Standardized guidelines for disinfection were apparently created by the Olympic Planning Unit, but no reference is presented and we have no idea if those guidelines are in line with European or other international recommendations.
We would like to thank the reviewer for giving us the opportunity to clarify this issue. We added in the text the following sentence: “The standardized disinfection guidelines were created according to the European Working Group for Legionella Infections Guidelines[17], and the World Health Organization Guidelines[16]”.

Methods, p. 8 (Figure 1): this reviewer is surprised by the lack of direct communication lines between the peripheral and central labs, and the apparently unidirectional links between the Olympic unit and its Ministry. We would like to thank the reviewer for giving us the opportunity to correct the Figure 1. The links between the Olympic Planning Unit and the Ministry of Health were not unidirectional. We corrected the links in Figure 1. No electronic communication existed between the peripheral and central labs during the Olympics.

Methods, p.8: Any training on sampling methods? We would like to thank the reviewer for giving us the opportunity to clarify this issue. Water quality training included water sampling procedures. To clarify this issue we added in the methods section the phrase “water and food sampling”. Moreover, in the results section, page 12, we added the phrase “and water sampling”, since training and certification of standardized inspections included training on water sampling.

Methods, general: Nothing mentioned and no references presented about the laboratory methods used. It should also be stated what quality assessment/control methods and systems these various laboratories follow, if they are accredited (ISO or else). This is especially important for the more difficult analyses of virus and parasites (and their viability) as the overall program didn't show any positive results for Giardia, Crypto and viruses. We would like to thank the reviewer for giving us the opportunity to clarify this issue. We added the following paragraph at the methods section: “The Laboratories performed microbiological testing were participated in an external quality control scheme (EQUASE) before and during the research period. Water samples collected from water supply systems were tested for microbiological parameters in accordance with the methods specified in the standing European legislation. The detection and enumeration of Legionella spp. was performed at the Legionella Reference Laboratory of the National School of Public Health. Before and during the research period, the reference laboratory participated in an external quality-control scheme for Legionella detection in water (Quality Management Ltd, Lancashire, UK), through a periodic distribution of water samples seeded with unknown Legionella spp. and concentration.”

Methods, general: The reasons or criteria used to choose 5724 premises for inspection out of the possible total of 44741 should be presented (and discussed). We would like to thank the reviewer for giving us the opportunity to clarify this issue. The main reason to choose 5724 premises for inspection out of the possible total of 44741 was the impossibility to inspect all the premises. The methodology and criteria used to choose the premises inspected included and detailed discussed in Reference (12). To clarify this issue we added in the text the following sentences: “Out of the total 44,741 premises of environmental health interest were identified as potential inspection sites, 5,724 premises were registered and inspected. The methodology and criteria used to choose the premises inspected, and the
coverage rate per inspection topic have been published and discussed elsewhere (12)"

**Results, p. 10:** The total number of days of the Olympics and para-Olympics should be presented.
We would like to thank the reviewer for giving us the opportunity to clarify this issue.
We added in the Background section the following sentence:
“The 2004 Olympic Games started on August 13 and finished on August 29. The Paraolympic Games were scheduled two weeks later, starting on September 17 until September 28. Olympic period was defined as the period between August 2 (opening day of the Olympic Athlete’s Village) and September 30 (closing day of the Olympic Venues).”

**Results, p.11:** Data entry from peripheral labs should be explained too.
We would like to thank the reviewer for the very useful comment. We added in the Results section, p.11 the phrase: “as well as the Peripheral Public Health Laboratories”

**Results, p.12:** It is not clear whether the training of 865 hours is per inspector or the total for the 196 inspectors. Also, the acronym USPHS VSP is used for the first time and should be explained in full.
To clarify this issue we referred in the text that the 250 PDPH officers including the 196 environmental health inspectors underwent the training of 865 hours. The training of 865 hours is not per inspector. The training lessons were attended by groups of officers.

**Results, p.13:** An "enhanced communicable diseases surveillance system" is mentioned without any further description or reference. It should be fully described as the discussion heavily rests on its performance.
The only Reference exists until now was added at the discussion and results sections [20]. The communicable diseases surveillance system cannot be described in this paper because it was not created and implemented by the authors but by the Hellenic Centre for Infectious Disease Control.

**Results, general:** An overall coverage rate per inspection topic should be presented (and the performance discussed in comparison with existing recommendations or standards at the European or international levels).
The overall coverage rate per inspection topic is presented at Reference [12]. To clarify this issue we added the following paragraph at the methods section: “and the coverage rate per inspection topic have been published and discussed elsewhere.”
Results and Discussion, general: Some results in Table 1 are rather intriguing. While the differences for hotels are somewhat explained and addressed, there are similar huge variations over time for Seacoast, Areas requiring pest control, cooling towers that would need a word of explanation. Also, it is not clear whether these inspections are control ones or inspections of new sites, and it should be discussed as it can influence significantly the trends over time.

We would like to thank the reviewer for giving us the opportunity to interpret some results. We added at the discussion section, p. 16: “The number of inspected seacoasts was small and therefore it is not safe to draw any conclusion. The improvement of inspection results of cooling towers and water distribution systems could be explained by the alertness of hoteliers and associates of the Athens 2004 Olympic Games Organizing Committee achieved through the guidelines concerning Legionnaires’ disease prevention.”

Inspections and microbiological examinations presented in Tables 1 and 2 were repetitive, while some of them conducted in new sites. To clarify this, we added two sentences at the results section, p. 11: “Inspections presented in Table 1 were repetitive, while some of them conducted in new sites.” and “Microbiological examinations presented in Table 2 were repetitive, while some of them conducted in new sites.”

Discussion, p.15: While I agree that the Olympics were an absolute success, this assertion should be referenced as this is a scientific paper :-) Also, the effectiveness of the environmental health surveillance program is in good part based on the corrective actions taken (it should be mentioned)
The majority of mass media and news agencies reported the success of the 2004 Olympics. There is not a scientific reference to support the statement.
We added at the discussion section the phrase: “which was based mostly on the corrective actions taken.”

Discussion, p.16: I believe (line #4) that it is the “un-successful” response that is illustrated by the 2003 outbreak, and it was corrected thereafter by the communication network.
We would like to thank the reviewer for giving us the opportunity to clarify this issue. At the discussion section the following phrase was added: “This was not achieved at the 2003 outbreak, but it was corrected thereafter by the communication network.

Discussion, p.17: The assertion “it is unlikely the small outbreaks may have gone undetected” is unwarranted given the lack of evidence/references regarding the communicable diseases surveillance system.
Same comment about the next line stating that “insufficient infrastructure and limited time did not affect the effectiveness of the program”. Please adjust the discussion accordingly.
Some discussion about the hypothesis of possible corruption of inspectors (given the high economic stakes for hotels and restaurants) should also be include in the paper.
We believe that the enhanced communicable diseases surveillance system as discribed at the references (20): Dafni U, Tsiodras S, Panagiotakos D,

We believe it is unethical to mention possible corruption of inspectors without evidence. Even a simple world of possible corruption may result in legal consequences.

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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)**

p. 15: the outbreak of salmonellosis (add 2003 for clarity)
We added “2003”.

p. 15 the word "formation (of inspection reports)" is not clear. Is it creation? or else?
We replaced the word "formation" with “creation”.

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**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 of importance in its field
Quality of written English: Needs some language corrections before being published
Statistical review: No
Declaration of competing interests:
I declare that I have no competing interests
Reviewer’s report

Title: Management of environmental health issues for the 2004 Athens Olympic Games: is enhanced integrated environmental health surveillance needed in every day operation?

Version: Date: 1 9 August 2006
Reviewer: Denis Zmirou-Navier

Reviewer’s report:

General
This paper describes with some detail the environmental health (EH) inspection and surveillance system that was built for the Athens 2004 Olympic Games, and draws upon this experience to suggest some lines of action for EH surveillance in less exceptional situations.

The topic covered by this paper is of public health interest and the experience that is described is valuable for those who are, or will be, in charge of designing and conducting EH surveillance systems for similar mass gathering events (such as world fairs, continental or world wide sports meetings and alike). However, as it stands, the paper falls shorts of providing the information that would make it usable, especially as regards learning that can be drawn from this experience to design and conduct EH surveillance in routine situations. It could be improved in many ways; some are suggested hereafter.

We would like to thank the reviewer for the very useful and constructive comments

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

- The title is not self-evident. Does it relate to extension of the enhanced integrated surveillance to routine surveillance, beyond mass events such as Olympic Games, as the conclusion of the summary and of the main paper would suggest? Is it a question relating to the Olympics and similar mass events themselves?

We included in the title the word “routine” in order to be clearer that we are suggesting the usage of modified enhanced environmental health surveillance beyond mass events. Thus the title now is: “Management of environmental health issues for the 2004 Athens Olympic Games: is enhanced integrated environmental health surveillance needed in every day routine operation?”

- The summary, although long, is unclear and too general so that the hastily reader might miss the message. For instance, authors might want to specify that water quality monitoring deals with drinking and recreational water; also, listing some types of facilities that were inspected might give the reader a clearer view on what the paper is about. It is important that the time frame of the project be specified in the results section, in reference to the timing of the Games. Finally, whether the summary conveys the information that justifies its
conclusion (i.e. such an EH surveillance system is applicable also in more routine circumstances) is unclear.

We would like to thank the reviewer for giving us the opportunity to clarify this issue. We replaced the phrase “water quality monitoring” with “drinking and recreational water examinations”. We added in the summary some types of facilities as the reviewer recommended. As we cannot add more words at the summary, the timing of the Games was added at the background section in the text, while the time frame of the project was specified in the text results section, 3rd line. We cannot add more information in summary to justify the conclusion due to the word count restriction, but a thorough justification is given at the discussion section.

- The background section suggests that the modern urban lifestyle resembles the situation of mass gathering such as Olympic Games, and consequently, public health (including EH) measures taken in the later circumstances are valuable also in the former. Because this seems to be the important message the authors want to convey, this short statement warrants development and justification. A more thorough review of the literature would be useful to add convincing evidence. This holds true also in the discussion section.

We would like to thank the reviewer for the very useful comment. To add convincing evidence we added two [2], [3] references at the background and discussion section:


- Similarly, one may regret, as a general comment that too few references are given to mass events other than Olympic Games. Now, the situation described by the authors and its learning extend to other situations such as world fairs, other sports events (football cups, world athletic championships that have been documented in the literature.

We would like to thank the reviewer for the very useful comment. We added three more references concerning mass events other than Olympic Games:

- Methods section. The Evaluation sub-section is overly vague. It lacks specifics about the criteria and parameters that the Olympic planning unit has used to evaluate the programme and its components. This piece of information would be very interesting to those who would have to design similar surveillance systems.

We would like to thank the reviewer for giving us the opportunity to clarify this issue. Since evaluation is “strong” word, we are now using the word “performance”. We change the paragraph as follows: “The overall objective of the program was to prevent outbreaks among athletes and spectators and to have improved scores in standardized inspections and in satisfactory microbiological tests. Statistical analysis over time of the standardized inspection results and water quality tests results together with the communicable diseases surveillance findings were used to assess the performance of the environmental health surveillance program.”

- Discussion section. The key message of the authors warrant additional arguments (including extended literature references). Several times, one finds the idea that similar integrated EH surveillance is also needed on a routine basis, but with a different perspective. Unfortunately, it is unlikely that the important resources that need to be mobilized to implement such an EH system would be allocated on a routine basis by national authorities, after the mass or political events that justified them. The authors might therefore want to go beyond their general statement and discuss, among other issues, how, based on their experience, one could prioritize the components of the system they successfully set with intense (but transitory) input from national authorities, or how one could maintain a similar but less intensive surveillance system: what is essential, what could be slackened etc?

We would like to thank the reviewer for the very useful comment. We added in the discussion section the following paragraph:
“Registry forms could be more simple and concise. Standardized inspection reports could be shortened and including less items. Premises could be categorized with different priorities for inspection according to the risk. The data collection, analysis and reporting could be on a weekly basis. More over the response system with the standardized corrective action could be peripheral and not central.”
It should be noted that the inspections and sampling are conducted in a routine basis. The only extra cost is the standardization, data entry, data transmission, and analysis. Taking of the advantage of new technologies (information, communication etc) the integrated environmental health surveillance system is nowadays feasible and actually do not cost too much.

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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)

- Methods section. The end of the first paragraph is unclear. One does not understand whether food hygiene is included or not in the surveillance system. In the water quality surveillance program sub-section, the reader might want to know which are the threshold concentrations for the different micro-organisms that were monitored, that would label a sample
as positive. Not everybody is familiar with European Union water quality regulations and WHO guidelines, and this information would facilitate interpretation of the results section.

The environmental health surveillance program included only food safety issues related to food premises located outside the Olympic venues. To clarify this, we added the following sentence in the methods section, at the end of the first paragraph: “The environmental health surveillance program included food safety issues related to food premises located outside the Olympic venues.”

We believe that to mention in this paper the threshold concentrations used to characterize a sample as positive for all the different micro-organisms that were monitored would made the paper too extensive and complicated. We added two References [13] and [14] which includes the threshold concentrations.

- In the Vessel sanitation sub-section, the first occurrence of VSP should explicit what this acronym stands for.
We corrected this issue.

- Discussion section. The reasons why the proportion of positive microbiological tests increased during the last two months before the Games is unclear. The corresponding sentences (p 15) are somehow clumsy.
We corrected the sentence referred to the increased proportion of positive microbiological tests as follows:
“It should be noted that some Olympic venues were ready for use and sampling just one or two weeks before the Olympic Games, thus, the first sampling microbiological results were not satisfactory since inadequate flushing might have been carried out.”

- Figures 2, 3 and 4 exhibit different time frames (100 days, 160 or 300 days before the end of the Olympics. Why?
Microbiological results are presented during the last 100 days before the end of the Olympics because in this period were conducted most of the sampling in everyday basis. The same for the figure 4 in which 160 days before the end of the Olympics were conducted most of the inspections outside the Olympic venues. Figure 3 includes the results of the last 300 days before the end of the Olympics because a large number of inspections were conducted inside the venues during test events during one year period before the Olympics.
Discretionary Revisions (which the author can choose to ignore)

- While authors claim that the EH surveillance system was a success, it is said p 17 that about 12.7% of al premises of public health interest were inspected. Is this a high figure? Some comments would be of interest.
The methodology and criteria used to choose the premises inspected included and detailed discussed in Reference (12). To clarify this issue we added in the text the following sentences: “Out of the total 44,741 premises of environmental health interest were identified as potential inspection sites, 5,724 premises were registered
and inspected. The methodology and criteria used to choose the premises inspected, and the coverage rate per inspection topic are included and detailed discussed elsewhere.”

**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**: Needs some language corrections before being published

**Statistical review**: No

**Declaration of competing interests**: I declare that I have no competing interests