Author's response to reviews

Title: The FIFA Women's World Cup in Germany 2011 - A practical example for tailoring an event-specific enhanced infectious disease surveillance system

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Author's response to reviews: see over
We like to thank the reviewers for their very helpful and constructive comments to improve the manuscript. Please find your comments addressed one-by-one in the following section:

Reviewer's report - Reviewer: Sarah Thackway

1. Is the question posed by the authors well defined?
   Yes, the question is an interesting one and worth exploring.

   ➔ We thank the reviewer for this comment.

2. Are the methods appropriate and well described?
   The methods are reasonable, although the section is long and would benefit from editing.

   ➔ We thank the reviewer for this advice and further edited the methods section.

   The authors note that district health authorities were asked about existing resources. Can this be explained? Does it refer to public health staff numbers and/or training, infrastructure, emergency preparedness, other?

   ➔ We further clarified the question about existing resources (please see p7).

   The statement about the 2006 World Cup on page 7 requires a reference.

   ➔ We now included two references to support this statement (please see p7).

   The statement about ‘certain measured that seemed appropriate’ requires more explanation on what the criteria was used to determine if measures were appropriate or not.

   ➔ We added some further explanation of the criteria used (please see p7).

3. Are the data sound?
   The results are mainly qualitative, which is relevant for this sort of work. This section is long and would benefit from editing.

   ➔ We thank the reviewer for this comment and further edited the result section.

   The results include a mix of methods and results and these should be separated.

   ➔ We disagree with the reviewers comment. Some of the implemented methods are results of the consensus process among the district health authorities which is described in detail in the methods section; the implemented methods might appear as to have their
place in the methods section, however they are results of the consensus process and as such belong in our opinion in the result section.

On p.9 the authors note that ‘cases directly associated with the World Cup were to be tagged’. Does this refer to players, team support staff, or spectators? Does ‘Directly associated’ refer to being linked to a stadium or with travel to and from and during the event?

➔ We modified the sentence to „cases linked to the World Cup“ and added a definition „defined as team members, support staff or spectators including travels to or from the stadium or having visited any World Cup-associated event like a game or fan zone“ (please see p9).

Page 11 refers to 2 cases of measles as an ‘outbreak’ this would appear an over assertion even if the cases were linked.

➔ We corrected this sentence to „(...) state health authorities reported 2 confirmed measles cases among participants of a football camp in Italy (...)“.

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?
   Yes, this appears so

➔ We thank the reviewer for this comment.

5. Are the discussion and conclusions well balanced and adequately supported by the data?
   Yes, this section of the paper is good and informative. It is important to discuss varying levels of surveillance based on the outcomes of a detailed risk assessment.

➔ We could not agree more and thank the reviewer for this comment.

6. Are limitations of the work clearly stated?
   Yes

➔ We thank the reviewer for this comment.

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
   Generally. The authors refer mainly to the previous experience in Germany but do provide references to other planned mass gatherings.

There is no reference to the detailed documents released that described the
surveillance aspects of the Beijing or Athens Olympic Games. These would be
helpful to refer to in the background as they provide the extent of surveillance
that could be undertaken for the large mass gatherings.

We thank the reviewer for the advice and have now included a reference to the
Athens 2004 Olympic Games. However, we were not able to find an English article
referring to infectious disease surveillance during the Beijing Olympic Games and would
be very interested to hear about any advice on sources of information that deal with this
topic.

The authors references 13 and 18 are not clearly linked to the paper.

We deleted reference 13, however kept reference 18 as we think it is important to
provide a reference with the information on the number of tickets that were going into
public sale.

8. Do the title and abstract accurately convey what has been found?
Generally yes. Refer to issues below:

• In attempting to summarise the background the authors have deleted important
considerations for the need for enhanced surveillance activities. For example the
authors have not included reference to the following factors: duration, season
and crowding. The authors refer to ‘participants origin’ and it is assumed this
refers to the country of residence of players, team support workers and
spectators, however, this requires clarification.

We incorporated your first comment in the abstract (please see p2). However, we do
not agree that “participants origin” should be further specified, as we wanted to refer to
mass gathering events in general; participants defined as players, team support workers
and spectators does apply to sport matches but this must not necessarily be the case for
other events, for example religious mass gatherings.

• Also in the background the authors note that the women’s world cup was
’substantially smaller’, does this refer to the number of competitors, spectators or
other?

Please find this comment addressed on p2.

• Could the authors explain why the enhanced surveillance was conducted only
Monday – Friday and what provisions were undertaken to ensure timely reporting
of an incident of public health concern on a weekend?

Because of the word limit in the abstract section we added the following sentence to
the results section to give further explanation: “Due to financial constraints and existing
or to be implemented on-call duty for week-ends the majority of district health authorities requested transmission of infectious disease notifications only Monday-Friday.”

- The results refer to world-cup outbreaks. Can the authors be clear this relates to ‘infectious diseases’?

➤ We changed the sentence to „World Cup-related infectious disease outbreaks“.

9. Is the writing acceptable?
The paper requires editing prior to publication. Examples of poor language are:
- ‘common consensus’ this is a tautology.
- Last paragraph on Page 5 ‘Developed (Germany …) is missing the word ‘country’
- Government-developed SurvNet: is not clear
- Page 6: ‘The aim of our description was therefore to …’

➤ We changed the examples pointed out by the reviewer and conducted some further editing of all paper sections by a native speaker of English.

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, the manuscript does not need to be seen by a statistician.
Declaration of competing interests:
I declare that I have no competing interests

Reviewer's report - Reviewer: Jean-Claude Desenclos

Assessment questions:
1. Is the question posed by the authors well defined? Yes it is
2. Are the methods appropriate and well described? Yes
3. Are the data sound? Yes
4. Does the manuscript adhere to the relevant standards for reporting and data deposition? Yes
5. Are the discussion and conclusions well balanced and adequately supported by the data? Yes
6. Are limitations of the work clearly stated? Yes
7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished? Yes very much
8. Do the title and abstract accurately convey what has been found? Yes
Reviewers comments:
The authors report their experience in tailoring the German infectious disease surveillance system for a mass gathering event of medium size: the FIFA women’s world cup in Germany in 2011. If there is agreement that enhancing the routine surveillance system is legitimous for big scale mass gathering, the appropriate level of enhancement is still a matter of debate (to which extend the routine reporting system needs to be upgraded? Needs of additional tools such as syndromic surveillance systems or specific events tailored tools?). For middle size gathering there is very little experience reported in the literature. Based on their previous experience with the FIFA Men’s World cup 2006 in Germany the authors developed a strategy to tailor the event based enhanced surveillance for this much smaller-scale gathering. Since the information available on the size of the event 6 months prior to it’s occurrence was imprecise, the strategy was based on a needs assessment with the district health authorities in the cities that would host foot-ball matches. Enhancement of surveillance measures was then based on a majority consensus of the 9 district health authorities surveyed. The measures were implemented the first day of the event until 1 day after it ended. In supplement to the consensus measures the national surveillance institute implemented a daily report of unusual events from district and state health authorities to the national level.

This paper which reports the pragmatic approach taken by the Robert Koch Institute to tailor reasonably the surveillance system to the size of the event and to it’s perception from the local surveillance authorities in charge of infectious diseases is of interest to epidemiologists that work on surveillance of infectious disease and are faced from time to time with mass gathering. It also brings new experience that is useful to share at the international level.

Minor essential revisions
1) The authors refer to the list of notifiable diseases. Since this list varies from country to country it would be useful that they give the list in a table or an internet link so that one can assess it’s extend and how much it covers all the potential infectious diseases risk linked to mass gathering.

We now provided an internet link to the English version of the German "Act on the Reform of the Communicable Disease Law" that lists all notifiable diseases.

2) The authors give estimate of tickets sold. However, it is not indicated how many of those corresponded to persons coming from abroad or moving to common places where the events took place. They also give absolute number, but ratios of incomers to the total population would be much more appropriate
since it would give a relative indicator.

➔ Unfortunately, we do not have any information on internal migration (i.e. movement from one city to another within Germany) during the event. We did provide the ratio (<5%) of tickets sold outside of Germany compared to domestic sales in the article. However, it would be difficult to decide on a meaningful denominator in terms of “total population”: should that be for example the entire German population or just the population of the host cities? Furthermore, the German Football Association (DFB) considers information on ticket sales to be very sensitive information and requested that we therefore refrain from including more detailed numbers regarding the ticket sales in our publication.

3) An unusual event report based on the routine reporting was added. However, the authors do not give the criteria that was used for this reporting. It would be useful to have it.

➔ There were no predefined criteria for defining such events. We added further clarifying information in the respective paragraph (please see p9).

4) The authors do not provide any estimate of extra time, work and cost that was associated with the enhancement of the surveillance. Although the enhancement was mild it would be extremely useful to still document how much resources, particularly human, it mobilized (for zero detection in this instance) since this mobilized resource was not available for other public health task.

➔ In our post-event evaluation we unfortunately did not ask for the time spent on the enhanced surveillance though it would have been a very valuable question. However, the methodology to gain reliable information would have exceeded the scope of our questionnaire. At this time point it will be very difficult to give a reliable estimate and we would therefore refrain from doing so.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

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

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