Author's response to reviews

Title: Sentinel surveillance of influenza-like illness in the Central African Republic, 2010-2015

Authors:

Alexandre Manirakiza (amanirak@yahoo.fr)
Marie-Yvette Batoumbou-Ketta (y.batoumbou@gmail.com)
Ulrich Vickos (vickos.ulrich@gmx.com)
Francis Komoyo (socratkomoyo@yahoo.fr)
Sandra Garba-ouangole (sandragarbaouangole@yahoo.fr)
Colette Bangue (bangucolette@yahoo.fr)
Edgar Djimbele (edgar.djimbele@yahoo.com)
Ombretta Passoti (ombrettapasotti@virgilio.it)
Eugene Kanga (eugenekanga@yahoo.fr)
Eloi Nicaise Mboufoungou (nmboufoungou@yahoo.fr)
Brice-Martial Yambiyo (ybricemartial@yahoo.fr)
Kathleen Victoir (kathleen.victoir@pasteur.fr)
Jean-Chrysostome Gody (jcgody@hotmail.com)
Miradad Kazanji (mirdad.kazanji@pasteur.fr)
Emmanuel Nakoune (enakouney@gmail.com)

Version: 1 Date: 01 Aug 2017

Author’s response to reviews:

The Archives of Public Health

Title of the manuscript: “Sentinel surveillance of influenza-like illness in the Central African Republic, 2010-2015”; by Alexandre Manirakiza; Marie-Yvette Batoumbou-Ketta; Ulrich Vickos; Francis Komoyo; Sandra Garba-ouangole; Colette Bangue; Edgar Djimbele; Ombretta
Dear Editor

We thank you for having submitted our manuscript for review and sending us the reports.

We have taken all the comments into account in revising the manuscript.

Best regards

Alexandre Manirakiza

Archives of Public Health

EDITOR REPORT: I suggest that authors revise the entire manuscript with an English native writer.

Authors’ response: The entire manuscript was rewritten with an English native writer: Professor Elisabeth Heseltine

Reviewer reports:

Reviewer #1: The current manuscript from Manikariza et al describes sentinel surveillance of Influenza in Central African Republic. Since data regarding influenza are sparse in many African countries, I consider that the following manuscript can be considered for publication. Overall, the manuscript is clear and conclusion reflect the results. I’m not enthusiastic with the English used as some wording are not correct or not used correctly. This manuscript could be suitable for publication after major revision.

Background:

In the background, 1st paragraph, authors are using sentences seen in many publication during the last decades. Recent good reviews have redefined better estimates of cases and death attributable to influenza viruses. I would prefer that authors referred to more recent data.

Authors’ response: These updates were made.

Line 12: two references to say that Flu affect all aged?? A good one is enough.
Authors’ response: We found that the information provided in these two references was complementary.

Line 25: I'm not sure that authors can state that ILI is the most common pediatric consultation since surveillance system was not in place except if authors have reference regarding that.

Authors’ response: We have changed and clarified this information.

Case definition: The case definition presented by authors definitely don’t follow the WHO case definition neither before or after the last change in 2014.

Before 2014: ILI case definition= Sudden onset of fever with measured fever of ≥ 38 C° AND Cough AND/OR Sore Throat, with onset within last 7 days

Since 2014: ILI case definition= An acute respiratory infection with measured fever of ≥ 38 C° AND Cough With onset within last 10 days.

If authors have used modified CD, they should have mentioned it.

Authors’ response: We agree with the reviewer and have made changes accordingly.

Laboratory procedure: Please specify when (dates) you have used the two different procedures. Please correct your procedure as CDC protocol is not a multiplex by itself as you only used one type of fluorophore and then one target per sample.

Authors’ response: These laboratory procedures have been clarified.

Data management: Please do not use the term Disease burden as it is not what you have estimated. Rather use prevalence for example.

Authors’ response: This change has been made.

Results:

All along your manuscript, harmonize the way you present numbers and proportion. Use always, when relevant this format XX% (N/D)

Authors’ response: The numbers and proportions have been harmonized.

Page 5 Lane 53: It is obvious that sentinel sites in Bangui see more children as authors explained that they have selected two pediatric sites. No need to do stats for that I guess, or maybe I misunderstood.

Authors’ response: We agree with the reviewer and have made the appropriate changes.
Page 6 lane 5. Sentence not clear. Do you mean that among specimen that tested positive you found 8.4% with influenza? Thus they were positive for what? I think There are some confusion between specimen tested positives and patient suspected with ILI.

Authors’ response: This change has been made.

Lane 9. If you are performing RT-PCR, it means you are detecting and not isolating. Correct all along the manuscript when needed.

Authors’ response: This change has been made.

Lane 15: Same as previous comment, since the type of site (pediatric vs. all ages) differed, proportion of positive that differed according age will induce a difference according site. This is a confounding factor in your analyses. Explanatory variables associated with a p-value less than 0.20 can be analyzed by logistic regression to investigate the confounding factors. Only predictors significant at a= 0.05 are then include in the final multivariable model.

In some part the text do not reflect the results presented in the table. Please revise. I also have some

Authors’ response: We agree with the reviewer that comparison of proportions of age between sites is not relevant. This analysis has been deleted.

Lane 20-26: Avoid the use of "rate of infection" which, in epidemiology represent the probability of an infection in a population and defined as= (NB infection/population at risk)*k (constant). In your case I will use instead prevalence or positivity rate among ....

Authors’ response: These changes have been made.

Lane 38: correct A/B3N2

Authors’ response: This change has been made.

Discussion:

1st paragraph: I don't understand (and don't believe) why differences observed in positivity rate are explained by geographical distribution of sites could you explain better. Could it be due to other reason more understandable? Ex. Case definition not sensitive or specific enough, quality of specimen (training, storage of specimen, etc.). As mentioned by authors in the conclusion, others pathogens that co-circulate with influenza might explain the positivity rate, but maybe not all?

What do author mean by health influencing number of samples collected?
Positivity rates are highest in 15-50 age group according to the table. Also, I'm not sure that analyses and p values are statistically significant when I look at numbers.

I would suggest to revise the entire discussion to (i) reflect the results, (ii) to make it clear what are the important outputs and findings from these study as it is a little bit confusing. Be cautious when comparing with other countries as each system might not be identically and then comparable. It is helpful to see some trends that's it.

Authors’ response: The discussion was revised as suggested by the reviewer.

Reviewer #2:

Hi Author,

Congratulations on your job, it's very important to show the result of surveillance.

But I have some consideration about it.

Maybe in the part of Temporal Distribution had a wrong in the line 38 or 39. I think that correct is A/H3N2 not A/B3N2.

Dear Editor

In my opinion, if it's possible to rewrite the Temporal distribution paragraph, it will be better to summarize it and to organize the idea.

Authors’ response: This paragraph has been rewritten.

In the third paragraph of the discussion, probably isn't rate cases of influenza I think it's better that you call it of proportion.

Authors’ response: This change has been made.

In the fourth paragraph it's difficult for me understand the burden of disease if you didn't work if population, maybe this is a proportion or like this but not the burden.

Authors’ response: This change has been made.

The second part of my comments is about (Data and sample collection and Laboratory procedures), in my opinion isn't necessary in the methods because this part reflect part of the surveillance not this paper.

My suggestion is that you put this two parts in the result in the subtitles "Description for Surveillance" or cut it.
Authors’ response: We described data and sample collection and the laboratory procedures to allow comparison of our results with those obtained by sentinel surveillance in other countries.

I hope that comments help your job and I apreciated a lot your paper.

Best Regards.