Author's response to reviews

Title: Morbidity in children living in a highly polluted region of the city of Ostrava, Czech Republic

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Author's response to reviews: see over
Environmental Health,  
Editor-in-Chief  
Philippe Grandjean,  
University of Southern Denmark;

Dear Professor Grandjean,

I have uploaded our revised manuscript MS 7552894821019738.  
These are my answers to the comments:

The editor.
The title has been changed to conform with the pattern you sent. Thanks.  
Thanks for the instructions how to format the title page – done.  
I would also like to inform you, that we have reduced using the term „preschool“ children and we are using the age instead.  
Finally, I have not indicated the changes in legends of graphs and tables using the tracking system, as I could not see the spaces between the name and number (e.g. Table1 instead Table 1). I have also diminished the size of Figures, that are now also included at the end of the text.

Referee 2.
I have accepted all comments and suggestions. Thank you.

Referee 1.
Too many tables:  
The number of tables was reduced from 10 to 7. The previous table 1 was deleted, the previous tables 5 and 6 were merged into a new table 4, the previous tables 7 and 8 were merged into a new table 6, and the previous tables 9 and 10 were merged into a new table 7. One table was added - table 2, pollutants.
Too many figures:
The number of figures was reduced from 9 to 7. The previous figures 2 and 3 were transformed into the table 2.

Type of the graphs:
The line graphs 2-6 were transformed into column graphs. The figure 7 remains as the line graph to show the over time differences between the incidences of illnesses in children born in the four consecutive years.

The ethics should be included referring to not only to approvals but also to medical follow-ups towards vulnerable children.

Our study is a retrospective study. I have added the following two sentences:

_We have also asked mothers to give pediatricians an informed parental permission to inform us about the present health status of children and all illnesses they suffered from birth to the age of 6. We have not done any further follow-up or collected any biological samples._

I miss some discussion on the limitations of the follow-up not having any information about nutritional and life style data of the children which may differ between the compared areas on top of the exposures to air pollution.

I have added the following paragraph at the end of the Discussion:

_Our study is a retrospective study. The data were extracted from pediatric documentation. The advantage of this approach is that the records were made at the time of illness and therefore are not memory biased. The disadvantage is, on the other hand, that the effects on morbidity of additional factors, such as children’s way of life (their physical activity, nutrition, etc) cannot be followed. From the published studies (most of them concerned with schoolers) it follows that there is a connection between life style of children and their parents, the latter of which is dependent on their socioeconomic status [e.g., 35], the proxy being mothers’ education. In a systematic review of the studies on unfavorable health outcome related to sedentary behavior of children aged 0-4 years, only low to moderate evidence was reported for the adiposity, psychosocial health and cognitive development [36]. In our study, a high incidence of acute respiratory infections in O. east children was already present in the 1st year of life when the vast majority of children were breastfed. Later on (in the 3rd, the 4th and the 5th year) from 40 to 90% children visited day care, which increased risk of their being infected (Table 4)._
Miroslav Dostal