Reviewer’s report

Title: Characterisation of acute respiratory infections at a UK paediatric teaching hospital following the H1N1 pandemic (Observational study assessing the impact of H1N1 on predominant viral pathogens)

Version: 2  Date: 2 April 2014

Reviewer: Nicolas Salez

Reviewer’s report:

Major Compulsory Revisions

It is known that the severity of influenza cases are associated in a significant number of cases with bacteria co-infection (Streptococcus, Pneumococcus ... ). How try to understand severity of viral Co-infection if bacteria had not been tested?

In the Pathogen detection section, you explain that respiratory samples were analysed in one of two ways: Rapid RSV test or multiplex PCR testing (which one contains RSV test); you have written that it was a retrospective study, what interest to use the rapid test sooner than PCR only (Known to be more sensitive). In more, this implies that not all samples had been tested for all pathogen? Or do you mean sample had been tested at hospital admission and all pathogen had been tested retrospectively!!! It really not clear

Minor Essential Revisions

Line 101, reference must be before the point [4-6]

Line 135 -138, you give reference for Influenza A, hMPV, hRV, and H1N1(2009)pdm but not for Influenza B, RSV, ADV, Para influenza 1,2,3, and H1N1… Can you explain briefly the way used to validate your duplex systems? How you done a duplex ParaInfluenza 3 and H1N1(2009)pdm if one is prepared in lyophilized format and the other performed with SSIII???

In the discussion, you write “H1N1 caused severe illness and mortality both in previously healthy children and those with co-morbidities” but you haven’t got shown the results of severity/mortality Versus Co-morbidity

Discretionary Revisions

Line 57, added the number of dead patient

Line 163, added the number of severe cases

Figure 4, can you add the number of patient each month

Line 244, replace “be least” by lower

Level of interest: An article of limited interest

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' below