Reviewer's report

Title: Causative Agent Distribution and Antibiotic Therapy Assessment among Adult Patients with Community Acquired Pneumonia in Chinese Urban population

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Reviewer: Stephen Baum

Reviewer's report:

This is a well thought out prospective study of the etiologic agents responsible for community acquired pneumonia in several areas of mainland China in the years 2003-2004.

The authors should define Atypical Pathogens earlier in the article although they eventually do so. This is confusing because this is not synonymous with the pathogens that cause atypical pneumonia, which include viruses as well as mycoplasma, chlamydia, etc.

Chlamydia should be changed to Chlamydophila

Although the authors make reference in the discussion to the fact that they were not able to identify pathogens in all of the patients, it is hard to pin down the percent of patients in whom they did identify pathogens because of the manner in which the data are reported as non-viral and Viral. There should be a brief table of % pathogens identified and then pathogens listed by percent of the total number in which pathogens were identified. i.e. If pathogens were identified in only 50% of cases then it is more meaningful that M. pneumoniae represented 40% of these than it is to say M. pneumoniae was identified in 20% of all patients. Actually both numbers would be most helpful.

Similarly for viruses where only 184 specimens were tested, the percents should be of the total isolates, not the total CAP cases.

In the same vein, it would be helpful for the most prevalent organisms that are not bacteria (for these culture is presumably the diagnostic tool) to know the percent diagnosed by serology vs culture, etc. This distinction is particularly important because the authors make much of "co-infection" and if one organism is identified by culture and another by serology, the second may actually have preceded the first and not really represent co-infection as much as serial infection.

For the bacterial results, they should be correlated with previous antibiotics used in the cases where this occurred.

There should be some comment on the way a high influenza prevalence year might change these findings
In the discussion, end of first paragraph, I think the authors meant to say lower susceptibility to macrolides rather than quinolones although both may be true.

The results in this study, although undoubtedly accurate will not necessarily be applicable in other geographic locations or in other time frames, but they do contribute to our knowledge.

Table 2 title should read non-viral

Tables in general: please see above comments

I believe the authors have all the data necessary to make these additions and changes.

**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