Reviewer’s report

Title: The Burden of Pediatric HIV/AIDS in Constanta, Romania: a Cross-sectional Study

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Reviewer: Dr Francois Dabis

Level of interest: A paper whose findings are important to those with closely related research interests

Advice on publication: Accept after revision, which I do not need to see

General comment: This is the most recent study describing the burden of pediatric HIV/AIDS in Romania, the country with the heaviest toll in Europe. The authors have attempted to make the best use of available data in the region of Constantia to provide an estimate of the magnitude of the problem and plea for improved case management through adequate services including antiretroviral treatment. The paper is reasonably well written, the limitations are well delineated. Some of them may be addressed however in a revised and improved version of the manuscript before publication.

Specific comments:

Abstract: Methods section should state how cases were identified. Second sentence of the conclusion is excessive as no denominator and therefore rate per population-unit is provided.

Background: Second paragraph: I think prevalence figures for children would be more useful than incidence as the issue in Romania appears to be the burden of cases, not the velocity of the pediatric HIV infection.

Methods:
. I am not sure (first sentence, as well as last sentence of the Background section) that this is really a community-based assessment. It is hospital-based rather than anything else.
. Third paragraph: I am concerned by the diagnosis of pediatric HIV infection below 18 months of age, the authors do not tell us what they do in this situation. What is in fact the case definition used in this study?
. If I understand correctly, this is a prevalence for a given
period, based on all children seen at least once in a hospital. The last sentence of this third paragraph on the representativeness and the coverage is not well documented for this purpose.

During the last paragraph: Fourth paragraph: The fact that medical record abstraction was the primary method of data collection does not tell how the records of those lost to follow-up were handled.

Results:
First paragraph, first sentence: were some cases meeting the inclusion criteria excluded from the analysis? if yes, for which reason(s)?
Second paragraph: how was the mode of transmission ascertained? What was the definition of a perinatally-acquired infection?
Third paragraph: I assume you provide here cumulative figures of the occurrence of clinical events over time rather than prevalence figures at the time of the survey. This requires clarification.
Last paragraph: ARV is a concern but one needs to know how many were truly eligible based on international criteria at the time of the survey. The two factors that remain associated with the lack of clinical progression are by no means of the same level of interest. This is insufficiently discussed in the Conclusions.

Conclusions:
First paragraph, sentence before last: To assess the burden on the system, one would need to know the rate for the county / state or for the city, for the overall population or even better per 10,000 or 100,000 under the age of 20.
Second paragraph: again, the issue of the eligibility criteria for ARV is not discussed at all.
Fourth paragraph: another way to document the burden of the problem would be to know how many children already diagnosed as HIV-infected or suspected to be infected died in the 90’s in Constantia.

Paragraph before last, it is unclear whether the vertical transmission has increased or if diagnostic procedures have improved and the proportion of horizontal transmission has - hopefully - decreased over time. This deserves some discussion.
Last paragraph: I would argue that proper case management of the already infected children that are diagnosed or can be diagnosed is per se a priority action for Constantia as the burden of disease is already there.

Tables
Table 1: use the same age categories in this table and in the prognostic study of disease progression. Is it possible to know the serostatus of the parents?
. Table 2: It would be worth knowing the circumstances and age at diagnosis in addition to the year of diagnosis. I assume that AIDS, ARV, PCP prophylaxis and hospitalization correspond to what has been documented at any point in time, not simply at the time of the survey.

**Competing interests:**

None declared.