Reviewer's report

Title: Treatment adherence with the easypodTM growth hormone electronic auto-injector and patient acceptance: survey results from 824 children and their parents

Version: 1 Date: 25 August 2010

Reviewer: Rachel Annunziato

Reviewer's report:

The present study “Treatment adherence with the easypodTM growth hormone electronic auto-injector and patient acceptance: survey results from 824 children and their parents” is an interesting, well-written examination of adherence to the easypodTM. It also presents comprehensive patient feedback about the device. The results have implications across patient populations and the potential to make an important contribution to adherence research. However, the manuscript is limited primarily by the presentation of the study methods and the results. The following suggestions are offered to strengthen these areas especially.

Discretionary Revisions:

1. In the Introduction on page 4 (second paragraph), it would be helpful to briefly review the non-adherence rates for this population. This is done in the Discussion but I think that doing so here would better convey the scope of the problem.

Minor Essential Revisions:

None

Major Compulsory Revisions:

1. It sounds like from page 7 that comparing treatment-naïve versus treatment-experienced patients is one of the study aims. This should be mentioned earlier with rationale in the Introduction for examining the difference. It’s a very interesting distinction that I think often is discussed under the rubric of patient age or developmental phase rather than potential “treatment fatigue”. Please also report secondary study aims. In the Results section, several analyses are mentioned without rationale (e.g., differences by treatment month, by country, etc).

2. In the Methods section, on page 6, much more detail is necessary about the study measures. Please discuss survey development in greater detail. Are there any psychometric properties available for any of the measures?

3. Please also provide more details about the study procedure. For example, at what age did children start completing the survey versus parents? If age was not the criteria, how was it decided whether children or parents completed the
survey? Did both do so? How many children versus parents completed the measures should be presented as well.

4. On page 7, the first paragraph is unclear. What do you mean by “the type of patient…was not a controlled factor?” Please explain in greater detail.

5. Also on page 7, please justify the definition of adherence used. This I think would fit better when describing the other study measures.

6. Similarly, the third paragraph on page 7 beginning with “Three different imputations were used” is unclear. What “tick boxes” are referred to? I think if the study measures are explained in greater detail, this will become clear.

7. On page 8, please discuss the reasons for incomplete data.

8. In the Results section, there are many instances where differences are referred to without corresponding statistics. Please report the analyses conducted (e.g., for increased non-adherence by month, differences between countries, etc). If any differences are nonsignificant, this should be stated.

9. Please report test statistic values, not just p values, throughout.

10. The authors have a great opportunity to share even more about the findings. I think it is essential to break down adherence by whether or not the child versus the parent is administering the injections.

11. Please also report whether children versus parents report different adherence levels.

12. On page 14, the “key factors” paragraph is unclear. The present study did not analyze correlates of adherence. Please clarify how this review relates to the present findings or delete to avoid suggesting associations that can not be made in the context of the present study.

Thank you for the opportunity to review this manuscript.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests.