

Response to Reviewers

We thank all reviewers for their useful comments. Please see our response below in italics.

Reviewer 1

Subjects: Diabetes classification should be better described, considering similarity of the clinical presentation regarding common diabetes symptoms (polyuria, polyphagia, DKA) and lack of biochemical markers (autoantibodies, c-peptide), correctly indicated as the limitation of the study. If acanthosis nigricans was used as the classification parameter, it should be contextualized to obesity-related indices. If a response to therapy/insulin requirement was used as a post-hoc classification perimeter, this should be indicated in the text.

Authors' response: Classification was based on clinical grounds: type 1 diabetes patients had lower BMI, were more sensitive to insulin; type 2 patients had increased in BMI, acanthosis nigricans was looked for and was present in all, and they needed more insulin with time. Insulin requirement reduced drastically in those started on metformin. Both had similar presentations: polyuria, polydipsia, polyphagia, wasting, even those who were obese accepted that they had lost weight. We have made appropriate additions to the manuscript. As we state in the limitations, differentiation between type 1 and type 2 can be very difficult in African youth with diabetes, particularly when autoantibodies and C-peptide cannot easily be measured. Ketosis-prone type 2 diabetes is noted from various African population.

Table 1: Lower and upper BMI ranges should be checked and corrected, if necessary. 3.

Authors' response: Values are as stated – there is a wide range in this population – which would have not just the normal wide range of body shapes but also undernutrition in some situations.

Biochemical methods: Type of sample (plasma, serum, whole-blood), preanalytical handling and the method/instrument for blood glucose measurement should be described.

Authors' response: After further thought and review we have removed initial glucose levels from the manuscript as the method was variable, and most but not all readings were the first readings obtained at initial presentation.

Comments to authors: Figure 2: Please correct the X-axis point descriptions.

Authors' response: *Adjusted.*

5. Discussion, section on patient education: are the telephones for biweekly education reminders available to all patients?

Authors' response: biweekly education is for all patients attending the clinic.

Conclusion: considering high DKA incidence and high mortality, an improvement in the availability of diagnostic technology at the primary care level seems also warranted in order to improve patient outcomes.

Authors' response: We have now included this point. Already, to address this need, we are campaigning that every hospital and clinic in Ghana should have meters and strips so that blood glucose of children and adolescents with suggestive features of diabetes can be

checked. We do education courses for doctors and health workers every year. These annual programs are yielding good results as seen in recent referrals.

Reviewer 2

There is a divergence regarding dates of follow-up: Materials and Methods (24/02/2012), Results section (June 2011), Results section (June 2011), and Figure 2 (Dec 2011) related with the increased trend in the number patients with diabetes. *Authors' response: We have harmonised this so that the first six-monthly census of numbers shown in Figure 2 is after the study onset (Dec 2011).*

Although Community and professional awareness surely are required to improve diabetes care, the focus and nature of study do not allow to take a conclusion in such matter. *Authors' response: We have edited this appropriately as the first reviewer asked for an extension of this comment.*

Please add the definition of the acronyms at Tables feet. *Authors' response: We have expanded each acronym in the table to address this point*

Age at diagnosis in one patient was lower than 1 year; it is necessary to add a paragraph to discuss this finding. *Authors' response: This has been included.*

It will be desirable to add a column with the p value in Table 1. *Authors' response: This has been included.*

Reviewer 3

The study needs following changes. 1. title should be precisely written as 'clinical profile of diabetic children and adolescents at diagnosis in endocrine clinic of Ghana.

Authors' response: The International Diabetes Federation and a number of national diabetes associations and journals do not use the word "diabetic" and instead say "people with diabetes" or "children with diabetes", as we have done. This is because many people with diabetes now strongly object to being called "diabetics" as they feel they are being labelled by their disease rather than the diabetes just being a part of them. Therefore we have now titled the paper "Clinical profile of diabetes at diagnosis among children and adolescents at an endocrine clinic in Ghana."

Reviewer's comments: 2. T1D is not a standard term and it should be mentioned as Type 1 diabetes and same for T2D accordingly.

Authors' response: this correction has been effected

Reviewer's comments: 3. Correction of grammar and spelling mistakes in heading of core tips, material and methods and discussion is needed.

Authors' response: We do not see any such grammatical or spelling errors. We used the British standard of English that is spoken in Ghana and Australia, native countries of the Authors – hence spelling of "paediatrics", "centre", and a few other words. We, however, would be happy to change the English version into American standard if the Editor requests this.

Reviewer's comments: 4. email address of all authors in mandatory

Authors' response: E mail addresses of all authors have been inserted.