ANSWERING REVIEWERS

Dear Editors,

Please find attached our revised manuscript entitled "Reducing Childhood Obesity through Coordinated Care: Development of a Park Prescription Program". The authors would like this manuscript to be considered for possible publication as an editorial in a future issue of the *World Journal of Clinical Pediatrics*. We appreciate the reviewer's comments and suggestions and feel that our responses have made the paper stronger. Please see below for a detailed response to each reviewer comment.

Reviewer 1: The authors created and an obesity prevention program that formally coordinated multiple sectors and described it in detail. The paper is well-written and provides information regarding a newly developed program for prevention of childhood obesity.
Response: The authors would like to thank this reviewer for their time and review.

Reviewer 2: The manuscript is truly informative, although I do have that some aspects needs to be clarified.
Comment: The generalized linear model the authors are using may be not the only model that can work and needs to be clarified in discussion.
Response: We agree with the reviewer that the generalized linear model that we propose is not the only valid statistical approach and have modified this section to reflect this suggestion and tailor it a bit more to our specific program (which may not be exactly the same for others). Please see the last paragraph on page 14 which now reads:
"Proportions and means are the primary scales of the dependent outcomes used to evaluate program outcomes. While not the only statistical approach available, we chose to use the Generalized Linear Model (GZLM) to model the impact of the Parks Rx 4Health™ program for all the dependent effects. We chose this specific approach because much like the General Linear Model that allows for variation in type and scale characteristics of the independent effects, the GZLM extends this versatility to include various types of dependent variables.

Comment: The dependent measure for each dependent effect will be based on the change from pre to post-test measurements (i.e., gain scores) is not precise, because the time lapse between two states (pre- and post-test measurement) may be variable. The introduction of an interim value may be important.
Response: We agree with the reviewer's comment and have modified the first and second paragraphs on page 15 that now read:
"Through different specifications of the link and probability functions, one generalized model is used to examine the statistical relationships between the design parameters (i.e., independent variables) and the dependent variables, regardless of their scale properties. Additionally, statistical consideration is given to repeated measures which needs to be considered in the current Park Rx 4Health model. One of the major benefits of the program to pediatricians is that they can track how their patient is doing in the program throughout the school year and thus they request multiple data collection time points. Although an additional independent factor (i.e. time) can be included in the

GZLM (i.e., Generalized Mixed Model), the results may be better interpreted when analyzed as separate short and long-term models. This is an important issue in the current model, because the time lapse between the pre- and post-test measurement) will vary by patient, and thus the introduction of an interim value may be important.

Measures taken at baseline will be included in the GZLM as covariates to insure pretest balance and as a control on regression to the mean. In studies involving weight loss or change, initial weight is a covariate that is often included in the statistical model since weight gain or loss is correlated with initial values. This dictates a statistical approach to the data analysis which accounts for the difference scores from baseline to post-treatment measurements as the dependent outcome using the baseline measurement as the covariate. SAS and JMP (SAS Institute, Cary, NC) are the primary statistical software packages used for all analyses."

Comment: Discussion and references regarding FTO polymorphisms should be added.
Response: An entirely new section has been added to the manuscript starting on page 18 as follows:
Another area of scientific interest to the team is the contribution of genetics versus environment to the current childhood obesity epidemic, particularly because our patient population is so ethnically diverse and most have family origins from outside the United States. Genome-wide association studies (GWAS) in pediatric populations have produced evidence to indicate a genetic component involvement in the occurrence and development of obesity[38-41]. In particular, the fat mass and obesity-associated gene (FTO) has received increased attention for being associated with the development of obesity [42]. A recent meta-analysis of 12 studies (that included 5,000 cases and 9,853 controls) has shown that the FTO rs9939609 polymorphism is associated with the increased risk of obesity among children and adolescents [43]. However, the major proportion of study subjects were Caucasian, and FTO polymorphism have actually been shown to not affect BMI or the risk of obesity in African Americans[41], a population who has been consistently shown to be at greater risk for obesity versus Caucasians [2,3]. Given that the overwhelming majority of Park Rx 4Health patients are not Caucasian, and about half are non-Hispanic black, one must consider that the patient's environment is having a greater impact on their weight than their genetic predisposition. For example, studies have shown that physical activity (versus sedentary behavior) counters the genetic predisposition to obesity[44] .These findings have major implications to the Park Rx 4Health program because its referral program Fit2Play™ has daily non-stop physical activity as its cornerstone. So, perhaps if we do capture patients with a genetic predisposition to obesity we can influence a gene-environment interaction by keeping them consistently physically active during the pediatric years. While the literature on obesity-related gene-environment interactions is still immature, it will no doubt be an area of much scientific inquiry in the future as obesity continues to spread around the globe.

Additionally, the following supporting references have been added:
38. **Dina C**, Meyre D, Gallina S, et al. Variation in FTO contributes to childhood obesity and severe adult obesity. Nat Genet. 2007; **39**:724-6.
39. **Loos R**, Bouchard C. FTO: the first gene contributing to common forms of human obesity. Obes Rev 2008; **9**: 246-250.
40. **Liu C**, Mou S, Cai Y. FTO gene variant and risk of overweight and obesity among children and adolescents: a systematic review and meta-analysis. PLoS One. 2013 Nov 22;8:e82133.
41. **Scuteri A**, Sanna S, Chen WM et al. Genome-wide association scan shows genetic variants in the FTO gene are associated with obesity-related traits. PLoS Genet. 2007 Jul;**3**:e115.

42. **Frayling TM,** Timpson NJ, Weedon MN, et al. A common variant in the FTO gene is associated with body mass index and predisposes to childhood and adult obesity. Science. 2007 May 11;**316**:889-94.
43. **Quan LL**, Wang H, Tian Y, Mu X, Zhang Y, Tao K. Association of fat-mass and obesity-associated gene FTO rs9939609 polymorphism with the risk of obesity among children and adolescents: a meta-analysis. . Eur Rev Med Pharmacol Sci. 2015 Feb;**19**:614-23.
44. **Andreasen CH**, Stender-Petersen KL, Mogensen MS, et al. Low physical activity accentuates the effect of the FTO rs9939609 polymorphism on body fat accumulation. Diabetes. 2008; **57**:95-101.

We have also highlighted the editorial changes that were made at the suggestion of the editorial staff. Please note figure 3 has been eliminated as we could not make the requested changes (which we did do for figures 1 and 2). You have the assurance that the authors have participated in all aspects of manuscript production and will take responsibility for the content. Dr. Messiah was responsible for the first draft of the manuscript**.** Additionally, you have our assurance this paper is not, and will not be, under consideration for publication elsewhere while under consideration by the *World Journal of Clinical Pediatrics*. None of the paper's contents have been published elsewhere and has been cross-references on Google Scholar to ensure no plagiarism was involved. This would be the case here in particular since this is the very first report of this program anywhere in the scientific literature and is largely based on our team's personal experiences. All authors have read and approve of the submitted manuscript. No payment has been received for this work. Finally, there are no conflicts of interest to report.

We would like to express our gratitude for the opportunity to re-submit the manuscript.

Sincerely,

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