



Comment on: “Mapping the Paediatric Quality of Life Inventory (PedsQL™) Generic Core Scales Onto the Child Health Utility Index-9 Dimension (CHU-9D) Score for Economic Evaluation in Children”

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Dear Editor in Chief,

The paper by Lambe et al. [1] presented a method for determining utility values from data collected using the PedsQL™ instrument. Since that publication, an issue has arisen requiring further clarification on how to calculate the desired utility value using one of the recommended algorithms.

The paper presented two algorithms for estimating Child Health Utility Index-9 Dimension (CHU-9D) utility scores from PedsQL™ responses. The first algorithm was derived from the coefficients of a generalised linear model (GLM), whereas the second algorithm was from the coefficients of an ordinary least squares (OLS) model. For the GLM, a logit transformation of the variable containing the CHU-9D utility scores was applied before the variable was used as the dependent in the prediction equation. As such, any predicted value from that equation will be a transformed value and therefore requires a back transformation to estimate utility values. The information on the back-transformation step is as follows:

Given that GLM_6 has a logit link, the CHU-9D utility values are calculated as shown below:

$$\text{CHU} - 9\text{D utility score[GLM]} = \frac{e^{\text{CHU-9D utility value}}}{1 + e^{\text{CHU-9D utility value}}}$$

(note that the algorithm for OLS_3 does not require this additional conversion).

Please do not hesitate to consult the corresponding author e.frew@bham.ac.uk if further clarification is required.

Compliance with ethical standards

Conflict of Interest Emma Frew and Tosin Lambe have no conflicts of interest.

Reference

1. Lambe T, Frew E, Ives NJ, et al. Mapping the paediatric quality of life inventory (PedsQL™) generic core scales onto the child health utility index-9 dimension (CHU-9D) score for economic evaluation in children. *Pharmacoeconomics*. 2018;36(4):451–65. <https://doi.org/10.1007/s40273-017-0600-7>.

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