Comparing the Health Utilities Index Mark 3 (HUI3) with the Short Form-6D (SF-6D): Evidence from an Individual Participant Data Meta-analysis of Very Preterm or Very Low Birth Weight Individuals

Corneliu Bolbocean, Stavros Petrou
Contact Information: Cornelilu.Bolbocean@phc.ox.ac.uk

UNIVERSITY OF OXFORD
NUFFIELD DEPARTMENT OF PRIMARY CARE HEALTH SCIENCES

Background

- **Importance:** The most appropriate preference-based health-related quality of life (HRQoL) instruments for trials or research studies that ascertain the consequences of individuals born very preterm and/or low birthweight (VP/VLBW) are not known. Agreement between the HUI3 and SF-6D multi-attribute utility measures have not been previously investigated for VP/VLBW and normal birthweight or term born controls. This study examined the agreement between the outputs of the HUI3 and SF-6D measures among adults born VP/VLBW and controls.
- **Objective:** To investigate the value of assessing HRQoL by concurrent use of HUI3 and SF-6D and examine the discordance between these measures in describing and valuing the HRQoL of adults born very preterm or at very low birthweight (VP/VLBW).
- **Methods:** Individual participant data (IPD) including HUI3 and SF-6D assessments were obtained from two prospective cohorts of individuals born VP/VLBW and controls contributing to the 'Research on European Children and Adults Born Preterm (RECAP)' consortium. The combined dataset comprised of 1049 individuals, and the ages of assessment in adulthood ranged between 22 and 23 years. A one-stage IPD meta-analysis was implemented using linear mixed models. Agreement between the HRQoL instruments was assessed using intraclass correlation and Bland-Altman plots.

Results and Conclusions

1. There was significant discordance between the HUI3 and SF-6D multi-attribute utility measures in the VP/VLBW sample, controls, and in the combined samples. Agreement between the HUI3 and SF-6D multi-attribute utility measures was weaker in controls compared with VP/VLBW individuals.
2. The HUI3 and SF-6D each provide unique information on different aspects of health status across the groups. The HUI3 better captures preterm-related changes to HRQoL in adulthood. Studies focused on measuring physical or cognitive aspects of health will likely benefit from using the HUI3 instead of the SF-6D.