

Relationship of EQ-5D Pain Domain and Bleeds - Insights from the PROBE Study

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Introduction

Bleeding in people living with haemophilia (PWH) has a significant impact on Health-Related Quality of Life (HRQoL). This impact has been used in terms of disutilities in cost-effectiveness analysis. The aim were to assess the impact on overall HRQoL when a bleed was reported in the last two weeks and assess the level of impact on outcomes.

Results

The level of pain reported using the EQ-5D-5L pain domain increased across all severities when a PWH reported having a bleed in the past two weeks (Table 1 and Graph1).

- The EQ-5D difference in utility scores for a Bleed in the last 2 weeks (Graph 2):
 - Severe: 0.092 (p<0.001)
 - Moderate: 0.058 (p=0.087)
 - Mild: 0.077 (p=0.029)
- The PROBE Score difference for a Bleed in the last 2 weeks (Graph 2):
 - Severe: 0.089 (p<0.001)
 - Moderate: 0.080 (p<0.001)
 - Mild: 0.074 (p=0.074)

Using a generalised linear model accounting for age, severity and current treatment regimen the disutility associated with a bleed in the last 2 weeks was 0.081 (p<0.001) for EQ-5D-5L and 0.086 (p<0.001) for the PROBE score.

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Methods

Data collected between 2018-2021 were analyzed to determine the relationship of bleeding events being reported within two weeks and the PROBE and EQ-5D-5L utility scores (Graph 2). 1168 questionnaires from male PWH A and B ≥ Age 18 (mean[SD] age 41.1[14.5]) were collected in 50 countries. Descriptive analysis and generalised linear models were produced using Stata 13.

Conclusions

Bleeding has a significant impact on PWH HRQoL. A disutility in HRQoL measured by the EQ-5D and PROBE score is two weeks after a bleeding event. The temporal limitations of the EQ-5D may mask the length of impact of bleeding events unless the context of recent bleeding events is considered. The resulting utility scores may lead to a misrepresentation of the true impact within the severe haemophilia population.

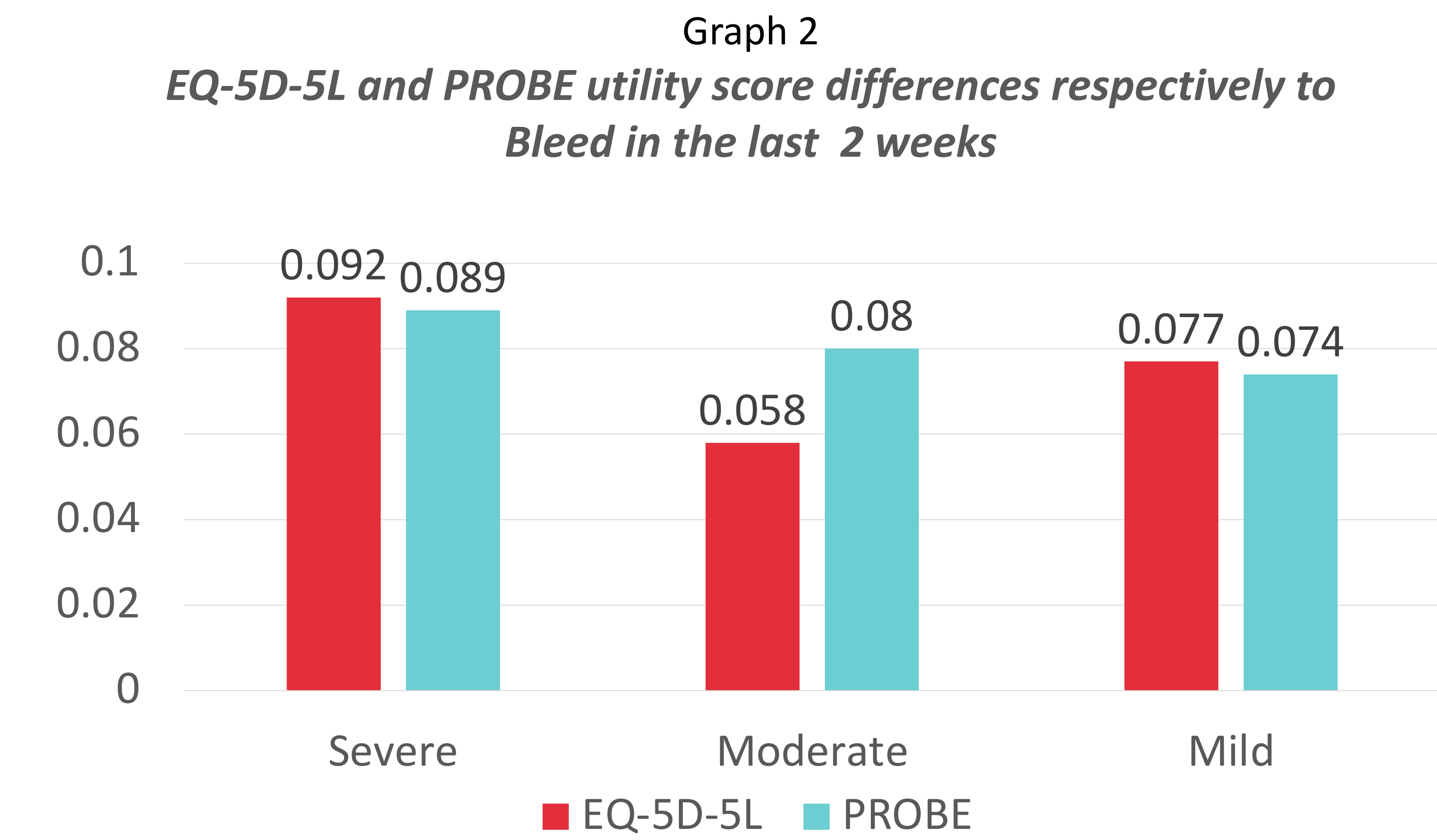


Table 1
EQ-5D-5L Pain Domain and reported Bleed in the last 2 weeks

EQ-5D-5L Pain Domain Level	Mild (n=148)		Moderate (n=197)		Severe (n=882)	
	No Bleed within 2 weeks	Bleed within 2 weeks	No Bleed within 2 weeks	Bleed within 2 weeks	No Bleed within 2 weeks	Bleed within 2 weeks
	n=103	n=15	n=115	n=73	n=545	n=317
I have no pain or discomfort (%)	42.72	20	25.22	13.7	27.34	12.93
I have slight pain or discomfort (%)	38.83	46.67	38.26	45.21	38.35	33.75
I have moderate pain or discomfort (%)	13.59	26.67	30.43	30.14	28.81	40.06
I have severe pain or discomfort (%)	4.85	6.67	4.35	8.22	5.5	11.99
I have extreme pain or discomfort (%)	0	0	1.74	2.74	0	1.26

