

Bone & Joint Open

Supplementary Material

Supplementary material i. Survey to calculate the disability weight for developmental dysplasia of the hip.

Q1: Statement by person who is agreeing to participate in the survey

I have read the above survey description and agree to participate in the survey. I understand that my participation is voluntary and that I may withdraw at any time.

I agree to participate in the survey

I decline to participate in the survey

Q2: Please specify the country in which you provide orthopaedic medical care

Q3: Are you a fully licensed/recognized surgeon in your country of practice?

Q4: Approximately what percentage of your practice involves managing paediatric orthopaedic conditions?

Less than 50%

Greater than 50%

Q5: Approximately what percentage of your practice involves managing DDH or its chronic sequela?

Q6: Between which conditions and their corresponding disability weights (DW) would you place untreated developmental dysplasia of the hip (DDH)?

Options ranging from DW 0 to 0.5:

Option 1) Amputation of Toe: DW 0.006

Option 2) Angina Pectoris: DW 0.033

Option 3) Dislocation of shoulder, long term, with or without treatment: DW 0.062

Option 4) Dislocation of knee, long term, with or without treatment: DW 0.113

Option 5) Severe neck pain: DW 0.229

Option 6) Fracture of pelvis, short term: DW 0.2790

Option 7) Most severe low back pain, with leg pain: DW 0.384

Option 8) Fracture of femur neck, long term, without treatment: DW 0.113

Option 9) Acute myocardial infarction days 1-2: DW 0.432

Option 10) Cancer, metastatic: DW 0.451

Options for participants to select from:

Less than option 1

Between option 1 and 2

Between option 2 and 3

Between option 3 and 4

Between option 4 and 5

Between option 5 and 6

Between option 6 and 7

Between option 7 and 8

Between option 8 and 9

Between option 9 and 10

Greater than option 10

Q7: Between which conditions and their corresponding disability weights (DW) would you place untreated developmental dysplasia of the hip (DDH)?

Options ranging from DW 0.1 to 0.2:

Option 1) Sternum or one or two ribs: short term, with or without treatment: DW 0.103

Option 2) Vertigo: Dw 0.113

Option 3) Very mild alcohol use disorder: DW 0.123

Option 4) Diabetic neuropathy: DW 0.133

Option 5) Urinary incontinence: DW 0.139

Option 6) Severe anaemia: DW 0.149

Option 7) Severe angina pectoris: DW 0.167

Option 8) Severe heart failure: DW 0.179

Option 9) Mild multiple sclerosis: DW 0.183

Option 10) Blindness: DW 0.187

Options for participants to select from:

Less than option 1

Between option 1 and 2

Between option 2 and 3

Between option 3 and 4

Between option 4 and 5

Between option 5 and 6

Between option 6 and 7

Between option 7 and 8

Between option 8 and 9

Between option 9 and 10

Greater than option 10

Q8: Between which conditions and their corresponding disability weights (DW) would you place untreated developmental dysplasia of the hip (DDH)?

Options ranging from DW 0 to 0.2:

Option 1) Mild impairment of distant vision: DW 0.003

Option 2) Mild low back pain: DW 0.020

Option 3) Fracture of clavicle, scapula or humerus, with or without treatment: DW 0.071

Option 4) Moderate fetal alcohol syndrome: DW 0.056

Option 5) Skull fracture, short or long term, with or without treatment: DW 0.071

Option 6) Traumatic brain injury with minor long-term consequences: DW 0.094

Option 7) Amputation of one arm: long term, without treatment: DW 0.118

Option 8) Hyperthyroidism: DW 0.145

Option 9) Severe fetal alcohol syndrome: DW 0.179

Option 10) Profound intellectual disability: DW 0.200

Options for participants to select from:

Less than option 1

Between option 1 and 2

Between option 2 and 3

Between option 3 and 4

Between option 4 and 5

Between option 5 and 6

Between option 6 and 7

Between option 7 and 8

Between option 8 and 9

Between option 9 and 10

Greater than option 10

Q9: Between which conditions and their corresponding disability weights (DW) would you place untreated developmental dysplasia of the hip (DDH)?

Options ranging from DW 0.1 to 0.3:

Option 1) Moderate neck pain: DW 0.114

Option 2) Uncontrolled asthma: DW 0.133

Option 3) Amputation of one leg: long term, without treatment: DW 0.173

Option 4) Iodine-deficiency goitre: DW 0.1999

Option 5) Complete hearing loss: DW 0.215

Option 6) Anorexia nervosa: DW 0.215

Option 7) Drowning and non-fatal submersion: short or long term, with or without treatment: DW 0.247

Option 8) Severe hearing loss with ringing: DW 0.261

Option 9) HIV: symptomatic, pre AIDS: DW 0.274

Option 10) Acute gout: DW 0.295

Options for participants to select from:

Less than option 1

Between option 1 and 2

Between option 2 and 3

Between option 3 and 4

Between option 4 and 5

Between option 5 and 6

Between option 6 and 7

Between option 7 and 8

Between option 8 and 9

Between option 9 and 10

Greater than option 10

Q10: Between which conditions and their corresponding disability weights (DW) would you place untreated developmental dysplasia of the hip (DDH)?

Options ranging from DW 0 to 0.4:

Option 1) Fracture of radius or ulna: short term, with or without treatment: DW 0.026

Option 2) Moderate low back pain: DW 0.054

Option 3) Vertebral column fracture: short or long term, with or without treatment: DW 0.111

Option 4) Decompensated liver cirrhosis: DW 0.176

Option 5) Severe neck pain: DW 0.229

Option 6) Epilepsy (seizures less than once per month): DW 0.263

Option 7) Cancer, diagnosis and primary treatment: DW 0.288

Option 8) Mild heroin and other opioid dependence: DW 0.335

Option 9) Vesicovaginal fistula: DW 0.342

Option 10) Amputation of both arms: Long term, without treatment: DW 0.383

Options for participants to select from:

Less than option 1

Between option 1 and 2

Between option 2 and 3

Between option 3 and 4

Between option 4 and 5

Between option 5 and 6

Between option 6 and 7

Between option 7 and 8

Between option 8 and 9

Between option 9 and 10

Greater than option 10

Q11: Using the visual analog scale, please indicate where you would place DDH between 0 (representing death) and 1 (representing perfect health)

Q12: Would you choose to live 80 years with DDH or 80 years with normal health?

80 years of DDH

80 years of normal health

Q13: Would you choose to live 80 years with DDH or 75 years with normal health?

80 years of DDH

75 years of normal health

Q14: Would you choose to live 80 years with DDH or 70 years with normal health?

80 years of DDH

70 years of normal health

Q15: Would you choose to live 80 years with DDH or 65 years with normal health?

80 years of DDH

65 years of normal health

Q16: Would you choose to live 80 years with DDH or 60 years with normal health?

80 years of DDH

60 years of normal health

Q17: Would you choose to live 80 years with DDH or 55 years with normal health?

80 years of DDH

55 years of normal health

Q18: Would you choose to live 80 years with DDH or 50 years with normal health?

80 years of DDH

50 years of normal health

Q19: Would you choose to live 80 years with DDH or 45 years with normal health?

80 years of DDH

45 years of normal health

Q20: Would you choose to live 80 years with DDH or 40 years with normal health?

80 years of DDH

40 years of normal health

Q21: Would you choose to live 80 years with DDH or 35 years with normal health?

80 years of DDH

35 years of normal health

Q22: Would you choose to live 80 years with DDH or 30 years with normal health?

80 years of DDH

30 years of normal health

Q23: Would you choose to live 80 years with DDH or 25 years with normal health?

80 years of DDH

25 years of normal health

Q24: Would you choose to live 80 years with DDH or 20 years with normal health?

80 years of DDH

20 years of normal health

Q25: Would you choose to live 80 years with DDH or 15 years with normal health?

80 years of DDH

15 years of normal health

Q26: Would you choose to live 80 years with DDH or 10 years with normal health?

80 years of DDH

10 years of normal health

Q27: Would you choose to live 80 years with DDH or 5 years with normal health?

80 years of DDH

5 years of normal health

Q28: Would you choose to live 80 years with DDH or 0 years with normal health?

80 years of DDH

0 years of normal health

We thank you for your time spent taking this survey.

Your response has been recorded.

Supplementary material ii. Formulas for three methods to calculate disability weight.

Preference rank series calculation:

Calculate individual PR list scores: $\frac{DW \text{ for condition above DDH placement} + DW \text{ for condition below}}{2}$

Average list scores for an individual: $\frac{\text{Summation of individual's list scores}}{5}$

Visual analogue scale calculation:

Convert individual VAS score to decimal value: $\frac{\text{Individual VAS response}}{100}$

Time-trade off exercise calculation:

Calculate the individual TTO score: $1 - \frac{\text{Equivalent time preferred to be spent in good health}}{\text{Lifetime of 80 years living with DDH}}$