

Cochlear Implant Quality of Life-10 Global Measure Scoring Manual

The Cochlear Implant Quality of Life-10 Global measure (CIQOL-10 Global) is a patient-reported outcome measure that was developed to provide a general overall assessment of quality of life in CI users.¹⁻⁶ Participants should be instructed to answer all of the items in the instrument so a comprehensive measurement can be obtained. The CIQOL instruments were developed and validated for adult (ages 18+) cochlear implant users.

Scoring the CIQOL-10 Global

All items utilize the same five answer choices. Individual items can be forward scored where 1=Never, 2=Rarely, 3= Sometimes, 4=Often, 5=Always or reversed scored where 5=Never, 4=Rarely, 3=Sometimes, 2=Often, 1=Always. The table below describes whether each item in the CIQOL-10 Global should be forward or reversed scored.

Forward Items	Reversed Items
1,2,3,4,6,7,8	5,9,10

To calculate the score, sum the individual item scores to obtain the raw score. Then use the table below to convert the raw score to the interval-scale score (“outcome measure”) as derived from item-response theory.^{5,6} Each outcome measure score has a standard error (SE) term, which is a statistical measure of variance. The 95% confidence interval around the outcome measure can be calculated from the SE: $95\%CI = \pm(1.96 * SE)$. For example, a communication raw score of 34 is converted to an outcome measure score of 52.84 with a standard error of 3.18 and 95% CI of ± 6.23 .

Score conversion table:

Global:

Raw Score	Outcome Measure	SE	Raw Score	Outcome Measure	SE	Raw Score	Outcome Measure	SE
10	0.0	13.31	24	38.21	3.13	38	58.00	3.36
11	9.14	7.54	25	39.56	3.12	39	59.60	3.42
12	14.86	5.59	26	40.91	3.11	40	61.26	3.50
13	18.53	4.77	27	42.26	3.12	41	63.01	3.59
14	21.36	4.30	28	43.62	3.12	42	64.86	3.71
15	23.74	3.98	29	44.98	3.14	43	66.85	3.87
16	25.82	3.76	30	46.35	3.15	44	69.04	4.07
17	27.69	3.59	31	47.74	3.17	45	71.49	4.34
18	29.42	3.46	32	49.14	3.18	46	74.34	4.73
19	31.03	3.36	33	50.56	3.20	47	77.82	5.31
20	32.57	3.28	34	51.99	3.22	48	82.42	6.27
21	34.03	3.22	35	53.45	3.25	49	89.54	8.31
22	35.45	3.18	36	54.93	3.28	50	100.00	13.84
23	36.84	3.14	37	56.45	3.32			

References:

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3. McRackan TR, Velozo CA, Holcomb MA, Camposeo EL, Hatch JL, Meyer TA, Lambert PR, Melvin CL, Dubno JR. Use of Adult Patient Focus Groups to Develop the Initial Item Bank for a Cochlear Implant Quality-of-Life Instrument. *JAMA Otolaryngol Head Neck Surg*. 2017;143(10):975-82. PMID: 28772297; PMCID: PMC5710256.
4. McRackan TR, Hand BN, Velozo CA, Dubno JR, Cochlear Implant Quality of Life Development Consortium. Development of the Cochlear Implant Quality of Life Item Bank. *Ear Hear*. 2018 (epub ahead of print). PubMed PMID: 30531259.
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6. McRackan TR, Hand BN, Cochlear Implant Quality of Life Development Consortium Velozo CA, Dubno JR. Cochlear Implant-Quality of Life (CIQOL): Development of a profile instrument (CIQOL-35 Profile) and a global measure (CIQOL-10 Global). *J Speech Lang Hear Res*. 2019 (in press).