

Introduction to Quality of Life Measures: Defining Health-Related Quality of Life Factors and Potential Methods of Assessment in Cancer Care

Health-related quality of life (HRQoL) factors affect physical or mental health. For example, social and environmental factors can influence an individual's quality of life (QoL). Identifying and understanding these factors are important because they affect cancer care delivery, treatment, and reimbursement.¹

As value-based care reimbursement models gain traction and uptake by insurers, understanding what HRQoL factors are, where they may be collected, and how they can be evaluated can assist health care providers in their practice.²

Examples of HRQoL Factors³:

- Health status
- Job
- Housing
- Education
- Neighborhood
- Culture
- Values
- Spirituality

Collecting HRQoL measures at multiple touchpoints along the cancer care continuum⁴



Considerations for Evaluating HRQoL Measures

QoL evaluations should take a holistic approach and consider the patient's treatment and environment. For example, with support of a family or spiritual network, a patient experiencing side effects from treatment may have improved treatment adherence and QoL.

Patient Surveys or Questionnaires Collect Information for HRQoL Assessment

Under the direction of a physician or other health care provider (HCP), staff can administer QoL surveys during the intake process, reducing the burden on HCP time. Studies show that early initiation of QoL-based care in oncology can lead to improved patient mood, satisfaction, and outcomes.

Examples of Patient HRQoL Surveys Available Online

- **The EQ-5D and EQ-VAS questionnaires** measure HRQoL in 5 dimensions: mobility, self-care, usual activities, pain and discomfort, and anxiety and depression. The tool then provides a utility score for health⁵
Sample available for download at:
https://euroqol.org/wp-content/uploads/2020/09/Sample_UK-English-EQ-5D-5L-Paper-Self-Complete-v1.2-ID-24700.pdf
- **36-Item Short Form Survey (SF-36)** uses 8 health metrics to determine an HRQoL score. The 8 metrics are physical functioning, bodily pain, physical health problems, personal or emotional problems, emotional well-being, social functioning, energy and fatigue, and general health perceptions⁶
Available for download at:
https://www.rand.org/content/dam/rand/www/external/health/surveys_tools/mos/mos_core_36item_survey.pdf
- **20-Item Short Form Survey (SF-20)** uses 6 health metrics to determine an HRQoL score. The 6 metrics are physical functioning, role functioning, social functioning, mental health, current health perceptions, and pain⁷
Available for download at:
https://www.rand.org/health-care/surveys_tools/mos/20-item-short-form/survey-instrument.html
- **McGill Quality of Life Questionnaire (MQOL)** is relevant across the oncology continuum of care and measures 4 subscales: physical symptoms, psychological symptoms, outlook on life, and meaningful existence. The MQOL predominantly measures the impact of "the existential domain on patient health"⁸
Sample available for download at:
http://www.npcrc.org/files/news/mcgill_quality_of_life.pdf

- **CDC HRQOL-14 Healthy Days Measure** is a general HRQoL questionnaire used to determine QoL in clinical populations. The survey assesses perceived “healthy days,” activity limitations, and basic mental and physical health.⁹
Sample available for download at:
https://www.cdc.gov/hrqol/hrqol14_measure.htm
- **QOL-ACD-BP** is a survey designed specifically for perioperative breast cancer patients but may apply to many different types of cancer treatment. The survey accounts for physical, emotional, and social aspects affecting QoL.¹⁰
Sample available at:
<https://link.springer.com/article/10.1007/s00432-018-2670-0/tables/1>
- **EORTC QLQ-C30** questionnaire for patients with cancer that captures information about physical and mental health, financial burden, and family and social support systems¹¹
Sample available for preview or request at:
<https://www.eortc.org/app/uploads/sites/2/2018/08/Specimen-QLQ-C30-English.pdf>

Additional Resources

- **Cancer and Quality of Life: Patient-Centered Research**¹²
- **Health-Related Quality of Life & Well-Being**¹³



References

1. Roswell Park. Improving quality of life for cancer patients. <https://www.roswellpark.org/cancertalk/202004/improving-quality-life-cancer-patients>. Accessed September 24, 2021.
2. Fundamentals of Clinical Data Science. Value-based health care supported by data science. <https://www.ncbi.nlm.nih.gov/books/NBK543518/>. Accessed September 24, 2021.
3. Centers for Disease Control and Prevention. Health-related quality of life (HRQOL). <https://www.cdc.gov/hrqol/concept.htm>. Accessed September 24, 2021.
4. National Cancer Institute. Cancer control continuum. <https://cancercontrol.cancer.gov/about-dccps/about-cc/cancer-control-continuum>. Accessed September 24, 2021.
5. EuroQol. EQ-5D. <https://euroqol.org/eq-5d-instruments/eq-5d-5l-about/>. Accessed September 24, 2021.
6. Rand Corporation. RAND medical outcomes study: measures of quality of life core survey from RAND health care. https://www.rand.org/health-care/surveys_tools/mos/36-item-short-form/scoring.html. Accessed September 24, 2021.
7. Rand Corporation. More about the 20-item short form survey. https://www.rand.org/health-care/surveys_tools/mos/20-item-short-form/more.html. Accessed September 24, 2021.
8. BMC Palliative Care. More comprehensively measuring quality of life in life-threatening illness: the McGill quality of life questionnaire – expanded. <https://bmcpalliativecare.biomedcentral.com/articles/10.1186/s12904-019-0473-y#Sec1>. Accessed September 24, 2021.
9. Centers for Disease Control and Prevention. CDC HRQOL-14 “Healthy Days Measure”. https://www.cdc.gov/hrqol/hrqol14_measure.htm. Accessed September 24, 2021.
10. Takada K, Kashiwagi S, Goto W, et al. Novel evaluation scale for QOL (QOL-ACD-BP) in preoperative chemotherapy for breast cancer. *J Cancer Res Clin Onc*. 2018;144:1547-1599.
11. EORTC Quality of Life. EORTC QLQ-C30. <https://www.eortc.org/app/uploads/sites/2/2018/02/SCmanual.pdf>. Accessed September 24, 2021.
12. Cancer Health. Cancer and quality of life: patient-centered research. <https://www.cancerhealth.com/article/cancer-quality-life-patientcentered-research>. Accessed September 24, 2021.
13. Healthypeople.gov. Health-related quality of life and well-being. <https://www.healthypeople.gov/2020/topics-objectives/topic/health-related-quality-of-life-well-being>. Accessed September 24, 2021.

