Evolution of the Quality Oncology Practice Initiative Supportive Care Quality Measures Portfolio and Conformance at a Veterans Affairs Medical Center

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Abstract

Purpose: A growing set of quality measures is being implemented to evaluate all components of cancer care, from diagnosis through the end of life. We investigated the Quality Oncology Practice Initiative (QOPI) quality measures portfolio. Additionally, we explored the effect of quality measure type on conformance.

Methods: We performed QOPI data collections twice per year from fall 2007 through fall 2010 and spring 2012, using chart review of the Durham Veterans Administration outpatient oncology clinic. We categorized QOPI measures as nontreatment-related supportive care (NTSC), treatment-related supportive care (TSC), diagnostic, or therapeutic. Descriptive statistics and χ^2 were used to compare longitudinal conformance.

Results: The majority of QOPI measures in spring 2012 assess processes of chemotherapy treatment (therapeutic, 54.3%;

TSC, 8.7%) or diagnostic modalities (19.6%). Measures targeting NTSC are few (17.4%) but increased from three measures in fall 2007 to eight measures in spring 2012. During those 5 years, average conformance to NTSC, TSC, diagnostic, and therapeutic measures was 71.4%, 86.1%, 89.3%, and 75.4%, respectively ($P < .001$). Within the NTSC measures, emotional well-being and constipation assessment were least documented (41.0% and 46.3%, respectively). In spring 2012, NTSC measure conformance (75.8%) remained significantly lower than diagnostic measure conformance (91.5%; $P < .001$).

Conclusion: Most QOPI quality measures assess diagnosis or treatment processes of care and not supportive care. Aggregate conformance to the NTSC measures was lower than that of other categories. The differential conformance demonstrates the necessity of standardized documentation methods and quality improvement efforts that remain commensurate with the increasing portfolio of supportive care measures.

Introduction

Several efforts are currently underway to drive improvements in the value and quality of cancer care delivery. These include an increased focus on patient-centered care,¹ further reduction in financially unsustainable practices that do not meet patient goals in advanced cancer,² and eliminating specific low-value services across all components of cancer care.³ The common thread of these efforts has been an increased emphasis on high-quality palliative care integrated into routine cancer care delivered by oncologists. Evaluation of processes of care largely depends on performing quality monitoring, often through the use of quality measures.

The most mature, longitudinal program for quality measurement in medical oncology is the American Society of Clinical Oncology (ASCO) –sponsored Quality Oncology Practice Initiative (QOPI) program. This initiative provides tools for quality assessment and benchmarking to assist practices in demonstrating quality of care.^{4,5} Since its inception, QOPI has demonstrated effectiveness in measuring conformance and improving cancer care.⁵⁻⁷ QOPI has been a resounding success in that it provides a validated and practical process for promoting oncology practice improvement.⁵ Furthermore, recent reports have demonstrated that QOPI-directed data collection and quality improvement efforts are sustainable and valuable to both academic and community oncology organizations.^{7,8}

In addition to informing accountability programs and spurring quality improvement, quality measures serve an important role in prioritizing processes and workflow. As quality measures guide care by serving as an audit method for all processes involved in cancer care, they inherently represent a way to select and sort components of care delivery in a hierarchical way. These implicitly reflect the comparative importance of several aspects of care, including those for diagnosis, treatment, and support.

In this study, we reviewed the portfolio of QOPI quality measures over the last 5 years and our conformance to these measures to determine whether adherence varies according to type of quality measure.

Methods

We performed QOPI data collections twice per year from Fall 2007 through Fall 2010 and again in Spring 2012 using electronic chart review of patients seen at the Durham Veterans Administration (VA) outpatient oncology clinic, staffed by VA and Duke faculty and rotating Duke fellows. Data were collected for the core, symptom, colorectal, and non–small-cell lung cancer modules. The end-of-life care module was performed in 2012. QOPI methodology was used to characterize and record conformance. We also categorized quality measures according to intent: nontreatment-related supportive care

(NTSC), treatment-related supportive care (TSC), diagnostic, or therapeutic. Quality measure conformance was calculated by using QOPI methodology and compared longitudinally.

Examples of measures classified as NTSC measures include assessment of pain, constipation, and emotional well-being. TSC measures included appropriate antiemetic use during chemotherapy. Measures related to pathology review, staging, patient history, and tumor markers were classified as being related to diagnosis. Therapeutic measures involved documentation of a plan for chemotherapy, chemotherapy intent (curative *v* palliative), chemotherapy treatment summary, appropriate adjuvant chemotherapy recommendations, and performance status documentation.

The percentage that NTSC, TSC, diagnostic, or therapeutic measures contributed to the total of the QOPI metrics was determined. Descriptive statistics were calculated and χ^2 used to compare mean conformance frequencies across annual time points with Bonferroni correction for multiple comparisons. Conformance to each category (NTSC, TSC, diagnostic, or therapeutic) was calculated in aggregate, using summative numerators and denominators for each group.

Results

From 2007 through 2012, types of quality measures included in QOPI have evolved. In 2007, 12.0% were NTSC (3 of 25), 12.0% TSC (3 of 25), 20.0% diagnostic (5 of 25), and 56.0% therapeutic (14 of 25); whereas in 2012, measures were 17.4% NTSC (8 of 46), 8.7% TSC (4 of 46), 19.6% diagnostic (9 of 46), and 54.3% therapeutic (25 of 46). This represents a 5.4% and 2.1% increase in NTSC and supportive care quality measures, respectively. In spring 2012, the majority of QOPI measures still assessed processes of chemotherapy treatment (therapeutic, 54.3%; TSC, 8.7%) or diagnostic modalities (19.6%).

At the Durham VA, aggregate mean QOPI measure conformance from 2007 to 2012 according to category was 71.4%, 86.1%, 89.3%, and 75.4% for NTSC, TSC, diagnostic, and therapeutic, respectively ($P < .001$). In 2012, conformance was 75.8%, 94.3%, 91.5%, and 79.6% for NTSC, TSC, diagnostic, and therapeutic, respectively. Thus, conformance within all categories improved in 2012 compared with the average from 2007 to 2012. In spring 2012, NTSC measure conformance (75.8%) remained significantly lower than diagnostic measure conformance (91.5%; $P < .001$; Fig 1).

At our facility, the pain assessment measure had the highest conformance (91.5%) among NTSC measures in the last 5 years (Table 1). The measures with the least conformance involved documentation of an emotional well-being assessment and performance of a constipation assessment (41.0% and 46.3%, respectively). Conformance to the constipation assessment measure changed only slightly from 50.0% in fall 2010 to 52.0% in spring 2012. Emotional well-being documentation increased moderately from 38.6% in fall 2009 to 49.3% in spring 2012. In aggregate, between 2007 and 2012, conformance to NTSC measures increased from 50.0% in fall 2007 to

Figure 1. Conformance to Quality Oncology Practice Initiative measures according to category at the Durham, NC, Veterans Affairs outpatient oncology clinic from 2007 to 2012. D, diagnostic; NTSC, nontreatment-related supportive care; Spr, spring; T, therapeutic; TSC, treatment-related supported care.

Table 1. Overall Conformance to NTSC Measures at the Durham VA Outpatient Oncology Clinic From 2007 to 2012

Measure	Conformance (%)
Pain	
Pain assessed by second office visit	91.47
Pain intensity quantified by second office visit	88.50
Plan of care for moderate/severe pain documented	70.21
Pain addressed appropriately	78.74
Effectiveness of narcotic assessed on visit after prescription	72.11
Constipation assessed at time of narcotic prescription or next visit	46.31
Emotional well-being	
Patient emotional well-being assessed by the second office visit	40.94
Action taken to address problems with emotional well-being by the second office visit	89.71

Abbreviations: NTSC, nontreatment-related supportive care; VA, Veterans Administration.

67.7% in fall 2008; it has remained above 70.0% from spring 2009 through the most recent measurement period.

Summary

Our work demonstrates several important lessons. First, we found that even in a short period of time, the portfolio of quality measures for oncology has evolved toward an increased emphasis on supportive and palliative care. To date, small but regular increases in supportive care measures have been seen; future growth may reflect a national movement toward increased incorporation of palliative care into the care planning of all patients with cancer, as has been recently supported by ASCO.⁹ Second, we demonstrate that, although conformance to NTSC was the lowest among the four types of quality measures we categorized, some measures exhibit a consistent trend toward increased conformance over time. Third, we show that longitudinal quality monitoring (assessment, measurement, and reporting) is feasible and sustainable in a Veterans Affairs

oncology clinic, which often has fellows and other learners rotating through.

Interestingly, aggregate conformance to the NTSC measures was significantly lower than other categories in the years analyzed. A potential explanation includes heterogeneous and non-standardized ways to document nontreatment measures. For example, whereas radiology measures (eg, electronic documentation of a positron emission tomography scan for lung cancer) are generally easy to find in electronic medical records, identifying whether an emotional well-being assessment has been performed requires abstractors to carefully read through provider narrative within clinic notes. Furthermore, recent evidence on the suboptimal inter-rater reliability of QOPI manual chart abstraction highlights the limitations of retrospective methodologies.¹⁰ These errors may both over- or underestimate the true quality of the care that was delivered.

Not surprisingly, one NTSC measure with high conformance was documentation of pain assessment. Success in this measure may herald several characteristics of highly feasible measurement. First, the clinical significance of pain assessment is universally appreciated; it is often referred to as the fifth vital sign.¹¹ The burgeoning body of evidence linking timely pain assessment and management to improved quality of life¹² solidifies the clinical relevance to both providers and patients. Second, because pain is often quantified numerically, it becomes a codified data element in an electronic health record that can be queried, analyzed, and reported with little effort. Third, most practices have shared accountability for this measure; for example, intake nurses often assess and document pain alongside other vital signs and in parallel to the provider's assessment. This practice further leverages every member of the health care team, ensuring that quality-based care is a team effort. This combination of clinical relevance, documentation ease, and shared accountability may be key to establishing pain assessment as a frequently documented quality measure. These characteristics should be considered in the evaluation of current measures and inform the development of the next cohort.

As a result of limitations inherent to retrospective chart abstraction, ASCO, the Commission on Cancer, and others are evolving processes to meet demands for prospective quality monitoring performed in parallel with other documentation tasks within oncology. Ongoing initiatives will assist development of cross-cutting quality measures that evaluate quality from time of cancer diagnosis through end-of-life care and be-

reavement. This has several benefits, such as rapid evaluation of the link between quality measure adherence and improvement in patient, caregiver, and health system outcomes. Additionally, familiar processes in other fields, such as Edmonton Symptom Assessment Scale¹³ use in palliative care for standardized symptom assessment, are increasingly being incorporated into oncology practice. Ultimately, these approaches will transform the way in which evidence related to quality of care is generated, aggregated, applied, and used to inform quality improvement.

In conclusion, the portfolio of supportive care quality measures is expanding, and in parallel, we have observed improvements in conformance to those measures over the past 5 years. Increased understanding of the value and utility of supportive care processes, ranging from symptom assessment and management to advanced-care planning and psychosocial assessments, is needed to inform the development of new quality measures for nondiagnostic or nontherapeutics components of care. Moreover, these measures must be relevant, easy to document within the usual flow of care delivery, and a responsibility of the health care team, both for continuous quality improvement and to meet the near-term demands of payers, administrators, and accreditors.

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References

1. Peppercorn JM, Smith TJ, Helft PR, et al: American Society of Clinical Oncology statement: Toward individualized care for patients with advanced cancer. *J Clin Oncol* 29:755-760, 2011
2. Smith TJ, Hillner BE: Bending the cost curve in cancer care. *N Engl J Med* 364:2060-2065, 2011
3. Schnipper LE, Smith TJ, Raghavan D, et al: American Society of Clinical Oncology identifies five key opportunities to improve care and reduce costs: The top five list for oncology. *J Clin Oncol* 30:1715-1724, 2012
4. McNiff K: The Quality Oncology Practice Initiative: Assessing and improving care within the medical oncology practice. *J Oncol Pract* 2:26-30, 2006
5. Neuss MN, Desch CE, McNiff KK, et al: A process for measuring the quality of cancer care: The Quality Oncology Practice Initiative. *J Clin Oncol* 23:6233-6239, 2005
6. Campion FX, Larson LR, Kadluek PJ, et al: Advancing performance measurement in oncology: Quality Oncology Practice Initiative participation and quality outcomes. *J Oncol Pract* 7:31s-35s, 2011 (suppl)
7. Blayney DW, McNiff K, Hanauer D, et al: Implementation of the Quality Oncology Practice Initiative at a university comprehensive cancer center. *J Clin Oncol* 27:3802-3807, 2009
8. Blayney DW, Severson J, Martin CJ, et al: Michigan oncology practices showed varying adherence rates to practice guidelines, but quality interventions improved care. *Health Aff (Millwood)* 31:718-728, 2012

9. Smith TJ, Temin S, Alesi ER, et al: American Society of Clinical Oncology provisional clinical opinion: The integration of palliative care into standard oncology care. *J Clin Oncol* 30:880-887, 2012

10. Warner J: Physician inter-annotator agreement in the Quality Oncology Practice Initiative (QOPI) manual abstraction task. *J Clin Oncol* 30, 2012 (suppl 34; abstr 226)

11. Lynch M: Pain as the fifth vital sign. *J Intraven Nurs* 24:85-94, 2001

12. Chang VT, Hwang SS, Feuerman M, et al: Symptom and quality of life survey of medical oncology patients at a Veterans Affairs medical center: A role for symptom assessment. *Cancer* 88:1175-1183, 2000

13. Chang VT, Hwang SS, Feuerman M: Validation of the Edmonton Symptom Assessment Scale. *Cancer* 88:2164-2171, 2000