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Enhancing Quality Improvements in Cancer Care Through CME Activities at a Nationally Recognized Cancer Center

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Abstract

Changing healthcare policy will undoubtedly affect the healthcare environment in which providers function. The current *Fee for Service* reimbursement model will be replaced by *Value-Based Purchasing*, where higher quality and more efficient care will be emphasized. Because of this, large healthcare organizations and individual providers must adapt to incorporate performance outcomes into patient care. Here, we present a Continuing Medical Education (CME)-based initiative at the City of Hope National Cancer Center that we believe can serve as a model for using CME as a value added component to achieving such a goal.

Keywords

Continuing medical education; Cancer care; Oncology; Practice gaps; Performance improvement

Introduction

The AMA's Principles of Medical Ethics states, "A physician shall continue to study, apply and advance scientific knowledge...and maintain a commitment to education." [1] Continuing Medical Education (CME) activities are the primary method that physicians use to maintain this commitment to lifelong learning. In fact, CME exists to develop clinical skills, advance professional development, and enhance awareness of current health policy trends [2]. These activities enable physicians and healthcare organizations achieve more effective medical practices, provide higher care quality, and adapt to emerging health policy. Research regarding the effectiveness of CME methods in inducing meaningful practice changes continues; however, studies have shown that practice-based CME programs can improve physician performance and patient outcomes [3, 4].

With complex therapeutic regimens, practice guidelines prone to rapid changes, and impending implementation of new physician reimbursement methods, oncology is one medical specialty that can benefit from focused CME programs specifically designed to affect physician behavior and performance. One major issue that exists for large cancer centers today is developing a strategy to combat impending healthcare legislation changes detailed in the 2010 Patient Protection and Affordable Care Act (ACA). In addition to expanding access to health care, one of ACA's main objectives is to control the upward-sloping healthcare cost curve while simultaneously improving care quality. Governmental payers (i.e., CMS) hope to accomplish this through a new payment system called *Value-Based Purchasing* (VBP) that takes effect in 2013 [5]. VBP will incentivize providers who perform well on predetermined quality metrics and penalize those who do not, which differs from the current *Fee for Service* model, where compensation places more emphasis on the number of services provided. Therefore, better performing hospitals/providers will earn higher reimbursement for similar services.

This paradigm shift in provider reimbursement presents unique challenges for large cancer centers. Now, oncologists must not only stay current on evolving practice guidelines, but also incorporate such knowledge into their clinical practices realizing that their patient outcomes will be tracked and published for consumers and payers of medical services to study. And if certain practice gaps compared to currently accepted guidelines for cancer care are not corrected, their institutions/group will suffer through decreased reimbursement and worsening reputation.

We believe one effective way that cancer centers can deal with this emerging issue is through implementation of integrated, institution-driven CME initiatives where the institution develops a process for not only educating physicians, but also changing their behaviors toward patient care through improved reporting of data and accountability. When these behavioral changes align with performance standards set forth by national oncology metrics, then overall institutional outcome performance can improve. As a National Cancer Institute (NCI)-designated Comprehensive Cancer Center and field test site for developing oncology-based quality metrics, the City of Hope (COH) is uniquely positioned to pilot programs designed to improve oncology performance standards. Here, we describe the CME initiative at COH, which we hope can serve as a model for other NCI-designated cancer centers in creating institutionally driven CME programs that both improve educational outreach and link such education to measures of clinical performance.

Location

COH is a nationally recognized cancer center dedicated to biomedical research, treatment, and education. It is composed of two main divisions: (1) COH National Medical Center—a

185-bed clinical research hospital and outpatient clinical facility dedicated to patient care and medical training through dedicated oncology fellowship programs and (2) Beckman Research Institute, one of five national Beckman research centers for basic science. COH's mission, therefore, is to treat complicated oncologic disease and further our understanding of cancer.

NCI Cancer Centers Program and the NCCN

Although the NCI Act of 1937 established the NCI, the NCI Cancer Centers branch was not conceived until the National Cancer Act of 1971 [6]. The Cancer Centers Program's goal was to designate hubs of biomedical research that enhanced cancer care while being centrally located near large metropolitan areas of cancer need. Three different designations for cancer centers exist in the USA:

1. Cancer Centers focus on laboratory, population science, clinical research, or some combination of these three components.
2. Comprehensive Cancer Centers demonstrate research activities in all three major areas mentioned.
3. NCI-designated Comprehensive Cancer Centers demonstrate research in all three areas and provide programs in community outreach and education.

Currently, there are 66 designated cancer centers—40 comprehensive cancer centers and 26 cancer centers [6]. Since 1998, COH has been an NCI-designated Comprehensive Cancer Center. Moreover, COH is also a founding member of the National Comprehensive Cancer Network (NCCN), a not-for-profit 21-member alliance of the top cancer centers in the USA whose goal is to “improve quality, effectiveness, and efficiency of oncology practices so patients can live better lives.” [7] The NCCN creates evidence-based clinical practice guidelines that are used by a variety of stakeholders including physicians, insurance companies, governments, patients, and the international oncology community.

Value of CME Activities

Historically, CME has been relevant only to physicians because the majority of states require physicians to obtain a minimum number of CME hours for licensure. With healthcare reform, however, we believe CME will become relevant for all healthcare practitioners, becoming a *value-added* institutional resource. The economic value-added framework as applied to cancer care can be described as the additional benefit, evidenced by better clinical outcomes and improved financial profitability, resulting from an initial investment (CME activities). In this regard, institution-driven CME activities can enhance economic value in the three key areas of the oncology healthcare value chain:

1. Cancer care providers (i.e., physicians, hospitals): An institutionally supported CME culture should strive to improve provider education that benefits patients through changed practitioner behaviors. Addressing practice gaps can be achieved through a variety of CME-based methodologies—Internet-supported learning centers, interactive problem-based teaching sessions, direct peer lectures, and simple poster-based clinical reminders—are just a few that have been successfully implemented at COH. As providers incorporate new clinical information disseminated through such CME initiatives into clinical decision-making, the economic benefits expected of such changed behavior can manifest as fewer unnecessary services/treatments resulting in lower cost, better prevention of therapy-associated side effects, improved access to current evidenced based therapy, and better patient satisfaction. This can result in cost-effective care.

Moreover, such performance metrics will be publicly available after 2013, giving additional incentive for cancer centers to improve in these areas.

2. Consumers of cancer care (i.e., patients): As a result of improved provider performance driven by CME initiatives, consumers should expect higher quality and mortality benefits for most cancers types. COH has experienced improvement of many quality metrics through its CME activities, and we believe that this has positively affected institutional perception because as patients develop a deeper trust of physicians who provide better care quality, improved patient experiences are expected, an enhanced doctor–patient relationship occurs, and better therapeutic compliance can result in improved patient outcomes. Interestingly, higher patient satisfaction itself may even be a predictor of a hospital’s care quality [8]. As patient satisfaction increases, hospital quality metrics via better outcomes and reduced complications can improve simultaneously. This relationship is clearly a reinforcing process, with direct implications for a strong CME initiative.
3. Payers for medical care (i.e., government, individuals, insurance companies): Improved performance on key oncology metrics driven by CME initiatives will result in more value for payers of medical care, and higher reimbursement should be expected. We believe that CME initiatives do not represent dead money. Instead, they are tools to enact meaningful practice changes that embody VBP. Cost-effective care and not just cost-contained care or rationed care can result from dedicated CME initiatives, and improved care will eventually result in higher reimbursement [9]. Additionally, governmental payers and large insurance companies will likely provide outcome data for their contracted physicians and healthcare groups so that tracking performance will be transparent among all stakeholders.

City of Hope’s CME Initiative

COH’s CME initiatives have been successful because of their long history in the organization and deep integration within its leadership structure. CME has been a priority at COH since the 1950s, maintaining full accreditation from the Accreditation Council for Continuing Medical Education. The CME committee is fully integrated into the COH organization (Figs. 1 and 2) and involves key members of hospital leadership, including the current Medical Staff President, Director of Quality, Patient Safety and Risk, Vice President of Quality and Patient Safety, and other physician designees. Currently, it emphasizes two key themes: (1) identifying practice gaps that exist for physicians as recognized through internal reviews and national quality metrics and (2) *quality improvement through physician education*. These goals serve the broader purpose of improving the quality and efficiency of care at COH so that the institution can remain a leader in oncology care.

As seen from Figs. 1 and 2, CME is well represented throughout hospital and medical staff leadership, allowing for dissemination of important goals through influential channels. This has the intended consequence of having a greater effect on physicians and hospital staff. Through this representation, COH supports an institution-wide culture embracing CME as a powerful tool for organizational change, embedded into the organization’s value system. Although the primary stakeholders—physicians, quality specialists, hospital administration, and CME office—have different primary responsibilities, they are united in a desire for continued practitioner/hospital performance improvement and have embraced the hospital’s CME initiatives as a tool to accomplish this goal. This is accomplished through a multistep process described below, which has been successful at COH.

Objective 1: Identifying Practice Gaps

The first step in practice improvement is determining where practice gaps exist. COH does this through two main methods: (1) *local data* which is derived from intra-institutional and system reviews generated through departmental quality metrics, peer review, and an online adverse event tracking system called “TIPS” and (2) *external data* which use national guidelines as dictated by organizations like the NCCN, National Quality Forum, or Medicare’s Core Measures Program. This is important because future legislation will require practitioners to provide quality data based upon specific metrics, which have not yet been defined. Guideline-based practice gap examples that may become future metrics include:

- Venous thromboembolism (VTE) prophylaxis in cancer patients
- Urinary catheter-associated UTI in hospitalized cancer patients
- Adjuvant chemotherapy administration within 4 months of diagnosis for patients <80 year with stage III colon cancer
- Tamoxifen or third-generation aromatase inhibitor use within 1 year of diagnosis for women with selected stage 1, II, or III hormone receptor-positive breast cancer

Objective 2: Achieving Improved Performance

At COH, the CME initiative attempts to change the previous CME mantra of “knowledge for knowledge’s” sake into “knowledge for performance sake’s” through a multistep process involving different stakeholders including the medical staff, hospital leadership, and quality office (Fig. 3). The process is set up so that any oncology metric can be measured and improved according to this structure. As a testament to this process, COH has already achieved a significant institution-wide performance improvement in numerous practice gaps. The VTE prophylaxis initiative, for example, has increased VTE prophylaxis compliance to >85 from <50 % using a strategy derived from the steps outlined below. The main steps of the process-based performance improvement are described as follows:

1. Identify practice gap and obtain current performance data: Current quality data are necessary in order to perform a meaningful comparison. The Quality Assurance and Improvement office obtains this through departmental quality metrics and periodic *Ongoing Professional Performance Evaluations* of all practitioners. Comparison of outcomes data to baseline after a specific intervention determines performance.
2. *Develop CME intervention/educational experience*: Knowing that many traditional CME interventions have only a moderate effect on changing physician behavior, it is important that *physician-friendly* platforms are utilized to achieve a specific CME goal [3, 10]. Many physicians may be resistant or unable to change, which emphasizes the significance of developing simple, effective tools. Moreover, younger physicians are more adept at using newer technologies and the use of web-based tools or applications may be helpful. Some examples of these platforms that have worked at COH include: the use of pre-printed order sets (i.e., VTE admission orders), using visual cues (i.e., posters, reminder handouts, white coat pins) in high traffic areas, having photographs rather than texts on such reminders because few take the time to actually read them, developing web-based tools to reinforce learning that makes it convenient for physicians to use, and incorporating learning issues into preexisting morning rounds in an interdisciplinary format with nurses, pharmacists, and medical students. Constant reinforcement of CME intervention is necessary for successful implementation.

3. *CME intervention drives practice changes:* As providers incorporate CME-driven initiatives that are aligned with specific quality metrics, patients should benefit through better outcomes and reduced side effects. Aligning physician incentives with hospital objectives can support this process.
4. *Quality data are remeasured, reflecting CME intervention:* Comparison of quality data after CME intervention will determine the intervention's successfulness, with expected improvement. If not, then the CME intervention should be reevaluated to determine its effectiveness. In addition, underperforming physicians are informed so that corrective measures, which may involve redesigning a specific CME initiative to better address a specific practice gap, are implemented.
5. *Comparison to national guideline/metric:* Once these metrics are agreed upon, then a meaningful national comparison can be made. Starting this process early, however, gives COH "first mover advantage" in researching and developing its performance improvement process for value-based purchasing.

The process described above only works because there is a commitment and communication from multiple, interdisciplinary stakeholders to make this strategy successful. Without such a commitment from medical staff leadership/administration (management), and the hospital board, such a strategy would fail.

Lessons for Practice: Key Drivers of Successful CME Implementation

We have identified five reasons that have driven COH's successful CME strategy for physician improvement, which can be implemented at any institution:

1. **Supportive culture:** COH believes that CME can increase overall value (economic and clinical) to patients, practitioners, and the institution as a whole. Leadership realizes the important role that CME can have in changing physician behaviors to align with performance goals and has developed a specific action plan to meet such goals. With this plan, an organizational culture that embraces CME now permeates throughout all aspects of cancer care at COH.
2. **Physician involvement:** Though every COH employee has a specific role in improving hospital performance, physicians alone are the primary controllers of hospital resources. They determine what therapies are implemented and what tests are ordered. Consequently, their behaviors directly correlate with performance metrics. At COH, physician leaders are directly involved in CME's agendas and its execution. As defined in Figs. 1 and 2, the physician chair of CME is a non-voting member of the Medical Executive Committee and is intimately involved in identifying any practice gaps noted during high-level healthcare quality discussions. Additionally, within each clinical department, physicians are encouraged to voice opinions about practice gaps and concerns over CME implementation through elected representatives. As more physicians buy into the CME culture, this creates a self-sustaining cycle of increased participation.
3. **Novel physician platforms:** Unique methods of learning allow both older physicians who are generally more conservative and newer physicians who are more versed in technology to optimize their CME experience. These platforms allow for convenient learning and integration. As newer platforms evolve and emerge (i.e., through mobile health, tablet computers, electronic medical records, etc.), even more change can be expected.
4. **Accommodating organizational structure:** COH's organizational structure promotes CME-driven process improvements and allows for effective communication of

goals to hospital staff from organizing committees. A specific strategy cannot be successful unless there exists an organizational structure that accommodates its success. COH has developed an organizational structure that includes ample CME representation so that the stakeholders with the most influence are directly involved with CME.

5. **Multidisciplinary involvement:** In order for CME to be successful, multiple departments spanning different skill sets work together. At COH, this involves the Quality Department, Risk Department, Medical Staff Services, Clinical Education Department, Information Technology Services, Audio-Visual Department, and of course, patient input via satisfaction surveys. All of these participants allow for successful CME implementation. Recently, a similar model of multidisciplinary involvement was described by the Veterans Affairs Quality Enhancement Research Initiative in order to enhance colorectal cancer care through the Cancer Care Collaborative (C4) [11]. In this model, the medical center director, chief of staff, and nursing executive all participated in the C4 collaborative in order to improve colorectal cancer care.

Conclusion

CME can be an effective tool to change organizational performance. In the future, such performance for hospitals will become increasingly more important as outcome data will be used to determine many factors, including hospital reputation and reimbursement. Therefore, it is useful to create modes to affect such performance. Here, we have presented an institution-specific, interdisciplinary CME initiative that aims to align clinical practice changes with health policy reform at an NCI-designated cancer center, with the goal of improving quality (QI). Furthermore, we have shown why CME is necessary, how it can be a valuable driver for institutional change, and how its success depends upon a variety of interrelated stakeholders. We hope that such an interdisciplinary initiative can serve as a model for similar cancer centers and other health care systems nationwide.

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Fig. 1. COH organizational chart. As depicted, the CME office has an integral role in the structure of COH leadership committees with representation through the Chief Medical Officer and via the Medical Executive Committee

Fig. 2.
The Medical Executive Committee represents Medical Staff Leadership

Fig. 3.
Developing a performance improvement strategy is a multistep process with many interdisciplinary stakeholders involved