Accountable Care for Cancer

Collaborative models may help reduce costs, ensure quality, and improve outcomes

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Healthcare reform is demanding lower costs without any compromise in quality or outcomes. Oncology is not exempt and, is in fact, one of the most obvious segments in need of value-based reform. Cancer care's drug-cost explosion in the first decade of the 21st century (driven by growth factors and new biologics) has abated temporarily due to a large number of cytotoxic agents losing their patents, followed by plummeting pricing driving down average sales prices (ASP), and possibly even as a result of the economic downturn. However, the pipeline of new targeted anticancer drugs—along with continued expansion of on-label and off-label use of existing drugs—is projected to bring cancer back to the top of the list of cost drivers in healthcare.

Cancer care costs clearly have the payers' attention—having reached the 10 percent threshold of their total claims paid. Vendors and tools are emerging quickly to help payers manage this particularly difficult segment of their medical loss ratio. That cancer costs need to be managed is no longer in doubt. The question that remains is: *Who will drive the ultimate solutions—payers or oncologists?* Will payers be compelled to hire or build utilization and disease-management programs or, rather, will oncologists develop and implement "cancer management systems," using a singular approach to all of their patients to improve quality, reduce costs, and derive the benefits of standardized processes? This article explores the drivers of cancer costs, opportunities for reducing costs, and the pros and cons of payer- versus oncologist-driven solutions.

The Payers' Perspective

Overall, the U.S. spent an estimated $124 billion in 2010 on cancer, according to the National Cancer Institute (NCI). At a payer level, actual costs of cancer care are often very difficult to obtain, even from more sophisticated large payers. Cancer costs are spread across many buckets of health plan systems, from Part A to Part B, as well as the pharmacy benefit. Cancer patients are difficult to measure as a population since many are treated actively and then go back to their primary care physicians.

Payers look at their costs on a per member per month (pmpm) basis; members are all enrolled persons, not just those with cancer. Using this methodology, the U.S. spends approximately $34 pmpm on cancer (assuming a 300 million census). The Medicare Fee for Service population has a strong upward weighting on this number as Medicare beneficiaries have an estimated 10 times greater cancer incidence rate compared with non-Medicare beneficiaries. For a commercial health plan with a mix of primarily non-Medicare and some Medicare Advantage, a more realistic range is $25 to $30 pmpm.

Payer discussions in recent years point toward the four largest buckets of cost as drugs, hospitalizations, radiation therapy, and imaging, in that order (see Table 1, pages 26–27).

Other "Payers" of Cancer Care

When thinking of the "payers" for cancer care, the tendency is to think only of commercial health plans and Medicare and to focus solely on the direct costs of care found in billable services. In fact, the true "payers" of cancer care are the employers who provide subsidized health insurance to employees and incur the lost productivity when cancer patients are unable to be fully productive at work. The true "payers" of cancer care are also clearly the patients and their families who are increasingly being forced to pay for a much higher percentage of their care through high-deductible plans or overall lack of insurance coverage. Often additional indirect costs of support are overlooked, such as transportation costs or caregiver support.

Another "payer" is emerging as a result of healthcare reform, driven by the Centers for Medicare & Medicaid Services (CMS) demonstration projects, as well as commercial payers' desire to engage providers directly in cost containment. In the new models of accountable care, providers (often hospital systems) take on the responsibility for the cost of care for patients—regardless of where the costs are incurred—and also for demonstrating quality. Depending on the appetite for risk, models range from accountable care organizations (ACOs) with substantial upside and downside risk to less risky models, such as the medical home with some upside in the form of gain share, albeit less than in a full-risk model. The underlying premise of these models is that the providers themselves have the best ability to manage the cost and outcomes of their patients through coordination of care and an emphasis on reducing hospital admissions.

A key issue being explored today in cancer care is whether the oncology medical home model might better suit the needs of patients with cancer, rather than the patient-centered primary care medical home model. The complexity of cancer care—combined with the prevalence of comorbidities that impact health status—tends to support the concept of the oncology medical home being better positioned to manage the overall health and healthcare costs of patients undergoing active treatment for cancer. Questions still remain as to "if" and "when" patients should be attributed to the oncology medical home, in particular for early-stage disease where the patient—after treatment for curative intent—may return to the primary care provider with only periodic follow-up visits to the medical oncologist.

Cost Savings (and Unintended Consequences) from Drug Reimbursement Reductions

Over the past decade, payers have implemented some cost-savings initiatives in cancer. Unfortunately, the most common tool payers have used to date in reducing oncology costs has been simply reducing the rates paid for infusional oncology drugs. While effective in reducing costs in the short term, these drastic reimbursement cuts have created unintended consequences that are ultimately counter-productive for payers, providers, and patients alike.

First, CMS and now many commercial payers adopted the drug reimbursement model of average sales price (ASP) plus a percentage. This change created a perverse incentive for oncologists to use more costly single-source drugs that generate a larger dollar margin than multi-source drugs where the cost (ASP) is significantly lower and the margin generated is nominal, if any.

Admittedly, only a handful of scenarios allow for such interchangeability among treatment choices, but they are often cited by payers as examples of economics driving behavior.

The shift towards hospital outpatient cancer care has been felt far more broadly, driven by community-based oncology practices unable to maintain viability with no drug margins and high working-capital costs for drug inventory combined with disproportionate risk of bad debt and spoilage on drugs. These costs, not unlike those of a small hospital, are often too great for what is otherwise an internal medicine practice to bear. Hospital outpatient oncology care is typically much more expensive for commercial payers who have limited leverage in negotiating with hospitals.

In recent years, hospitals are increasingly motivated to purchase oncology practices that are financially strapped by reimbursement rates. When hospital contracts are applied to drug reimbursement and drugs are purchased under 340B pricing, these now hospital-owned practices provide the hospital with lucrative margins.

Finally, although cause and effect is still unproven, an increasingly accepted theory links the implementation of ASP and the up to six-month lag in reporting price changes as a chief cause in the recent drug shortages for many multi-source oncology agents. The race by generic drug manufacturers to garner market share through price reductions that create a short-term margin (until new ASP results are reported and implemented) has resulted in dramatic price deflation for most oncology multi-source agents. Ironically, the result is to make the continued manufacture at low prices very unattractive. Other factors, such as increased FDA scrutiny of manufacturing facilities and shortages of certain raw materials, are also likely contributors. However, when looking at historical trends, it is difficult not to draw some correlation between ASP pricing and drug shortages.

Table 1. Cost Savings Through Utilization Management

While other opportunities exist within cancer care to reduce unnecessary expenditures (for example, biomarkers without mature data to drive clinical relevance), the areas below represent the most logical targets in the short to medium term. In the long term, if pathways type models are widely adopted, the mechanisms for evaluating inclusion on clinical pathways have the potential to change the pricing strategies of pharmaceutical and technology vendors to better reflect the relative cost vs. benefit of their products.

DRUGS	HOSPITALIZATIONS
The first and largest of these cost drivers is drugs, both for treatment and supportive care. The appropriate application of these treatments must be established on a foundation of evidence that not only demonstrates efficacy but also includes an evaluation of other factors such as toxicities and cost when alternative approaches to care have similar outcomes. Simply put, it is not enough to have multiple approaches to a particular state and stage of disease, with highly varying degrees of toxicities and costs. Reducing the cost of cancer care means delineating which single best treatments are appropriate for each patient presentation with alternatives utilized when unique presentations require a different evidence-based therapy. Whether the process is called treatment guidelines or pathways, this approach requires a thorough and ongoing literature review by practicing oncologists who critically assess the efficacy of alternative treatments and, in the absence of compelling superiority of any one treatment, drive to the treatment with the least toxicity. Finally, when multiple treatments have similar efficacy and toxicity, the process should promote the treatment with the least cost to the patient and payer. Managing the costs of supportive care drugs presents a slightly different challenge. While certainly a smaller piece of the overall spend compared to 5–10 years ago (due in large part to black box warnings for red-blood-cell growth factors), supportive care drugs still make the top 10 list for all cancer drug spend. Opportunities exist for cost reduction, for example through dose reductions to avoid adverse events or through delaying use in the non-curative setting. Using regimens with low emetogenic potential may result in cost savings by avoiding the use of high-cost antiemetics. However, these opportunities for cost reduction should be approached with caution; the unintended consequences from under-utilization (hospitalizations and/or deaths from febrile neutropenia or dehydration) are draconian and easily avoided today. Finally, opportunities to reduce the spend on drugs in oncology exist when patients and their families are empowered with better tools to assess the risk versus reward of pursuing therapy in the non-curative setting. My personal experience with both of my parents at the end of life was heart-wrenching, with futile efforts pursued repeatedly due to their lack of understanding of the natural course of the disease. This is an area where, as a society, we must do better and it starts with creating the tools and perhaps even incentives for the difficult conversations and transitions.	While many hospitalizations of cancer patients are unavoidable as a result of the toxicities of the disease and its treatments, instances exist where patients are re-admitted for presentations that could be managed proactively in a practice-based setting. Medical home models in cancer include not only pathways for decision support in the triage of patient-reported symptoms but, even more important, for ensuring that the practice has the capacity to see those patients on the same or next day. Access includes not only extended clinic hours (and often weekend hours) but also engaging advanced practice providers (NPs and PAs) to see these patients when all physician slots are routinely filled with scheduled patient visits. Treatment side effects such as pain, nausea, and vomiting are all either avoidable through appropriate prophylactic drug interventions or treatable in the outpatient setting. These cornerstones of the medical home model require not only additional practice resources but a cultural shift by everyone from oncologists to the front office staff. Incentive models must be aligned to promote these investments, which otherwise serve to reduce practice income. Finally, as with drug utilization, the transition of patients with non-curative disease to a strategy of palliation is critical to avoiding hospitalizations in the last six months of life.

Cost Savings Through Utilization Management

While reimbursement is one side of the healthcare equation (cost = rate paid X units billed), the other side is the appropriate utilization of services. Many high-cost treatments and tests in oncology care are unavoidable and, in fact, critical to achieving many of the recent gains in overall survival and quality of life. Unfortunately, others have not demonstrated superior outcomes but still carry very high price tags.

By focusing on those areas that drive the majority of costs, we can target a limited number of interventions that have the capacity to dramatically affect overall costs while not compromising survival and, in fact, likely even improving outcomes. See Table 1 above for more.

Cancer Management Systems

While there is no official definition of "cancer management systems," they can broadly be described as a set of tools (electronic or paper based) and processes for driving standardization of clinical decision making with the dual aim of improving patient outcomes and reducing the consumption

RADIATION THERAPY

Radiation therapy has emerged as a top cost driver in cancer care, due in large part to the increased use of advanced techniques such as IMRT. Radiation therapy as a distinct episode of care has opened the doors for radiology benefit management companies to expand their services into radiation oncology. As long as payers and radiation oncologists are at an impasse on appropriate utilization and length of therapy (due to the lack of an evidence base), the migration towards engaging third party benefit management companies is likely to continue. These models require radiation oncologists to obtain prior authorization for every new course of radiation therapy, require extensive administrative work by the oncologist including peer review calls with vendor medical directors, and often do not guarantee payment even when prior authorization is obtained.

This model is expensive to both sides and while generating cost savings to the payers, it does so at a very high cost to patients and providers. Most important, the model removes critical decision making on the appropriateness of therapy from the physician responsible for the care of the patient. One solution to this issue that is gaining acceptance with payers and providers is a transition to a bundled episode-of-care payment for each new radiation treatment that pays a flat amount for the entire course of therapy, regardless of the type of radiation therapy used or the number of fractions. This model is attractive to payers whose goal is the ability to predict the cost growth rate as a result of continued use of more expensive technologies. Bundled rates may be attractive to oncology practices as bundling locks in revenue at today's rates, eliminates prior authorizations, and removes barriers to reduce the number of fractions where the data are compelling for hypofractionation. A potential drawback of bundled rates for oncology practices is the difficulty in justifying expenditures for new technology when the return on investment is dependent on new billing codes. Such technology advances could be addressed through transitional periods of fee-for-service reimbursement on a "coverage with evidence" basis as used in other parts of healthcare.

IMAGING

Diagnostic imaging, the last of the top cancer costs categories, is an area largely unaddressed in terms of cost savings, even by prior payer efforts to manage imaging. (Third party radiology benefit management companies have generally approved all imaging in cancer.) Few studies exist to prove the utility of surveillance imaging for many types of cancer, even after treatment with curative intent. Often, surveillance imaging is ordered in the same manner as dictated by historical drug clinical trials, where imaging was key to measuring progression. If the use of imaging in surveillance has not been shown to improve overall survival, the earlier detection is simply additional cost for the payer and patient, as well as a source of possible additional emotional distress for the cancer survivor. ASCO's recent "Top Five" list of opportunities to improve quality and value in cancer care specifically called out this issue for early stage breast and prostate cancer. Imaging pathways, even where only consensus-based opinion, would serve to drive standardization of care and reduce costs where early detection of recurrence does not impact overall survival or quality of life.

of non-value-added healthcare resources (dollars), such as hospitalizations or futile care. Clinical content for driving the cancer management decisions must be either developed by providers within the institution or taken from a third party source of guidelines or pathways. Such content should be rigorously and transparently maintained and updated on a frequent basis. In addition, while many components of a cancer management system are people-driven (staffing, culture, etc.), the heart of the standardization and reporting that drives outcomes (cost and quality) are inherently technology oriented. Some elements are built into the oncology electronic medical records (EMRs), such as accurate dosing, clarity of orders, etc. However, many of the decision-support components are difficult to create, much less maintain, within today's oncology EMRs. Adjunct technology, such as pathways decision support, is often needed to drive adherence and reporting on agreed upon clinical content. Table 2 on page 28 describes many of the common features of a cancer management system.

Two basic business models exist for cancer management systems: payer-driven models and practice-driven models.

Table 2. Key Elements of a Cancer Management System

TECHNOLOGY
✔ EMR for chemotherapy management and collection of key data
✔ Decision support for driving treatment, symptom management, imaging, etc.
✔ Patient portal for patient-reported outcomes
CLINICAL CONTENT ALGORITHMS (GUIDELINES OR PATHWAYS)
✔ Available clinical trials within the practice
✔ Biomarkers
✔ Treatments – Medical oncology: drugs, doses, route, schedule, pre-meds, growth factors – Radiation oncology: dose, fractions, delivery modality
✔ Symptom management
✔ Surveillance
✔ Advance care planning
CONTENT UPDATE PROCESS
✔ Standing physician committees
✔ Consistent and transparent literature evaluation process
✔ Availability of evidence reviews
REPORTING AND ANALYSIS
✔ Adherence to guidelines or pathways
✔ Hospitalizations
✔ Hospice enrollment rates
✔ Patient satisfaction and other patient-reported outcomes
STAFFING
✔ Non-physician providers
✔ Patient navigators
✔ Social workers
CULTURE
✔ Patient-centric
✔ "Call Us First" (patients encouraged to call the practice first with any problems)
✔ Nurse triage process that directs patient to the office for manageable events
✔ Slots consistently reserved for unscheduled visits
✔ Extended office hours and days
COLLABORATION WITH PAYER
✔ Incentive models – Elimination of prior authorization requirements – Premium reimbursement – Gain share – Patient management fees – Case or bundled rates
✔ Data sharing to measure costs outside of practice (hospitalizations, oral drugs, etc.)

Beyond the obvious difference of who develops the "rules" for appropriate utilization is the more subtle difference of whether oncology providers can logistically, and even ethically, manage multiple set of rules depending on the patient's insurance type.

Payer-driven Cancer Management

These programs typically fall into traditional requirements for prior authorization by providers and sometimes include nurse call centers that engage patients directly in disease and/or case management. Another model that strives to affect both rates paid and utilization is the re-direction of services delivered to an alternate setting. Examples include specialty pharmacies where drugs are dispensed remotely by a licensed pharmacy on a patient-specific basis (and labeled as such) and either mailed directly to patients or to the practices for prompt delivery to the patient. Some payers are even pursuing alternate sites for the actual infusion of the drug (infusion centers). With few exceptions, these models are not embraced by oncologists who remain convinced that third party intermediaries are not effective in managing utilization, increase administrative burden, and can even be detrimental to care decisions, communication with the patient, and timeliness of care.

Provider-driven Cancer Management

There is now widespread recognition that providers must offer solutions to the cost issue or be subjected to payer-imposed programs and rate reductions. An emerging concept among oncology administrators and practicing oncologists is the development and implementation of provider-based "cancer management systems" that drive quality and cost effectiveness through the adoption of practice-wide solutions that cover all patients. Components of cancer management systems vary by institution, and the timing of implementation is often tied to practice-specific initiatives. However, most include decision support that drives adherence to agreed on pathways for radiation and drug treatment, biomarkers, supportive care, and imaging. They also include elements of a certified medical home, such as:

- Extended office hours
- Decision algorithms for phone triage for sending patients to the emergency department vs. seeing them in the office (coupled with open slots reserved for unscheduled visits)
- Care navigators to assist patients with the coordination and scheduling of other procedures and tests.

Lastly, and most difficult, is the adoption of the culture and systems to ensure that patients' wishes are discussed, documented, and adhered to relating to end-of-life care. Where palliative care specialists are not available, providers must ensure that the appropriate staff and oncologists receive formal training in advance care planning communication models. In all of these efforts, the emphasis is on retaining control over decision making for patients by self-managing costs and quality as an alternative to payer-defined programs.

Ensuring Quality Does Not Suffer

As the incentive models for cancer care fundamentally shift to those rewarding cost effectiveness, methods for measuring and ensuring quality must simultaneously be implemented. Failure to do so will invite the types of care rationing long associated with socialized medicine in other countries and even experienced in the U.S. during the 1980s with the HMO models. While the ultimate outcome that matters most to patients is survival, this metric is difficult to measure with statistical accuracy for all but the largest programs. Existing quality reporting programs, such as ASCO's QOPI, provide an excellent foundation of both process and outcomes measures that are timely and relevant. Consumers continue to drive the additional need for patient-reported outcomes and satisfaction that includes attention to the patient experience with providers and staff and not just a focus only on overall survival. These demands for quality and satisfaction reporting will only increase going forward and must be an integral part of the reporting capabilities of any cancer management system.

Cancer Management Systems & ROI

Implementation of cancer management systems requires a significant investment from providers—both in terms of costs for information systems and additional staffing and also in the potential for decreased contribution margins from drugs. Technology and content vendors typically charge implementation fees and monthly and/or annual "per physician" licensing fees for provision of the technology and clinical content updates. Alternatively, institutions will employ staff for software development and maintenance and pay physicians for clinical content work. In either case, these costs are not insignificant. Decreases in drug profits are also a possible outcome, depending on the previous practice patterns.

It is reasonable that cancer programs should expect to see a return on these investments or, at a minimum, funding to cover their costs. The logical source of financial return is from the entities that receive the savings, namely the payers. Gain share contracts are an opportunity to create a "win-win" relationship with the payers. Unfortunately, such contracts are often very difficult to implement and measure due to the complexity of the measurement across many claims sources, as well as the likelihood of a small population that will not meet statistical significance and, therefore, is subject to variability in costs unrelated to the efficacy of the cancer management system.

A more practical model is the cancer management system as a foundation for a collaborative relationship with payers that:

- Removes barriers, such as prior authorizations and specialty pharmacies
- Avoids rate decreases that might otherwise be imposed in the market
- Creates a differentiated relationship for the long term.

Additionally, oncologists have long advocated for a fee for patient management because the office visit E&M code does not begin to cover the care management efforts that fall outside of a clinic visit. Implementation of a cancer management system provides a reasonable opportunity to engage payers to fund such a management fee.

A cancer management system can benefit both internal practice operations and patients. As demonstrated in other sectors, such as the automotive industry, standardization of processes can drive efficiencies, improve quality, and increase customer satisfaction. For oncology care, standardization can potentially translate to:

- Better patient throughput
- Shorter wait times
- Fewer medical errors
- Enhanced communication among physicians and staff
- Reduced drug inventory
- Fewer denials.

Additionally, as larger practices and institutions consider contracting with payers to assume risk (whether bundled rates or per patient fees or through ACO participation), a cancer management system is critical to predicting the utilization and cost of services within and outside of the four walls of the cancer program. As important, when the evidence supports addition of a new therapy or expanded use of an existing therapy, providers must be able to rapidly model the impact of the change on patient populations and then ensure adherence to the agreed-on pathway for the new indication.

Finally, and possibly most significant, healthcare reform is creating opportunities for other providers to assume risk as ACOs or earn bonuses as medical homes. In this new milieu, the concept of "payer" begins to shift away from traditional commercial health plans to other providers, many of whom are cancer referral sources. Oncology programs will need a cancer management system to demonstrate their value (both quality and cost effectiveness) to those referring physicians to continue to receive their patient referrals or potentially develop new referral sources.

Who Will Be in the Driver's Seat?

Oncology providers have an opportunity to secure their place in the new healthcare world and ensure continued access to the highest value care for their patients; however, to do so providers must offer a better solution to those entities that pay the bills for cancer care. By providing the appropriate incentive models to oncologists, payers will be able to garner significantly greater savings than through traditional management models. Provider-led cancer management systems, while still in their infancy, offer the best hope for patients, providers, and payers to maximize both the quality and cost effectiveness of care while driving standardization and equity of care. Failure to deliver a better solution will leave much of this opportunity untapped and, instead, perpetuate an antiquated model of top-down utilization management. OI

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