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EDITORIAL

Payment for Cancer Care: Time for a New Prescription

Lowell E. Schnipper, *Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA*
Neal J. Meropol, *University Hospitals Case Medical Center Seidman Cancer Center, Case Western Reserve University, Cleveland, OH*

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The prescribing patterns of oncologists have long been of interest to health care economists and policy makers. Our field is unique in the extent to which we serve as both prescribers and dispensers of therapeutics. Because of the large profit margins historically associated with the management of outpatient infusion services, concern has been raised about the potential for physician-induced demand driven by financial considerations. Until 2005, oncologists were reimbursed at 95% of average wholesale price for chemotherapeutics; because they were often able to purchase these drugs at significant discounts, profits could be quite large. One example among many was the reimbursement for paclitaxel, which in 2004 was six-fold higher than the actual cost.[1,2] The introduction of the Medicare Prescription Drug, Improvement, and Modernization Act (MMA) was designed to reduce expenditures for costly agents, and in 2005, a payment system was introduced that paid fee-for-service (FFS) practitioners 106% of the national average sales price. This was felt to represent a more stable and reliable benchmark, while providing physicians with a revenue stream to compensate for the administrative costs involved in delivering these therapies.[1,3] After the MMA was implemented, economists sought to determine whether a reduction in profit from chemotherapy would alter physician behavior, either by increasing chemotherapy use overall or by shifting selection of treatment to those agents associated with the greatest profit margin. This hypothesis, derived from economic theories, postulated that physicians are motivated to achieve a balance between target income (while not compromising high-quality care) and personal leisure time.[4] The MMA provided the opportunity to conduct a so-called natural experiment.

The hypothesis that physician behavior is impacted by reimbursement in an FFS environment is supported by many studies. For example, Hadley et al[5] found that use of breast-conserving surgery rather than mastectomy was more frequent in geographic regions in which reimbursement was higher. Others have found that following the MMA, chemotherapy use was increased for drugs that maintained more generous reimbursement.[1,2] Shahinian et al[6] investigated changes in the use of androgen deprivation therapy in men with localized prostate cancer. After enactment of the MMA, the reimbursement for androgen deprivation therapy was considerably lower than before the MMA, and the use of gonadotropin-releasing hormone agonists declined substantially. Each of these studies suggests that financial considerations may have an impact on physician treatment behaviors. Consistent with these observational studies, survey data support the notion that oncologists are aware of the direct impact of chemotherapy and parenteral supportive medication prescribing on their incomes, particularly among physicians with productivity incentives.[7]

In the article that accompanies this editorial, Hornbrook et al[8] tested the hypothesis that following passage of the MMA, financial incentives led to reduced use of agents for which reimbursement declined substantially. In addition, they predicted that these relationships would not be present in integrated health networks that lacked financial incentives for providers. They explored chemotherapy administration among 3,613 patients with colorectal or lung cancers in the Cancer Care Outcomes Research Surveillance Consortium. Although administration of drugs affected by the MMA declined after enactment of the new payment model, the findings were not consistent between colorectal and lung cancers. Likewise, patients treated in FFS settings were less likely to receive drugs affected by the MMA after that law was passed. However, discordance was again observed for different cancers. These inconsistent findings suggest that factors other than financial incentives might play an important role in oncologists' prescribing patterns. For example, changes in practice patterns driven by new clinical data would not be surprising during this or any longitudinal study of oncology care. The rapid uptake and implementation of new evidence in routine practice is highlighted by a recent study that demonstrated a dramatic decrease in use of epidermal growth factor receptor inhibitors in patients with colorectal cancer when new evidence regarding *RAS* gene mutations as predictors of treatment resistance was disseminated.[9]

Ideally, the decision on whether to administer chemotherapy and which drugs to prescribe would have no associated financial incentive. Rather, oncologists would be reimbursed for the care they provide and would base their recommendations solely on evidence regarding treatment value in the context of individual patient preferences. Financial incentives could be aligned with clinical outcomes. Cost savings to payers and society would be realized through adherence to evidence-based practice, improved patient outcomes, and practice efficiencies derived in part from a simplification of the current payment structure. Recently, the American Society of Clinical Oncology proposed a model to achieve these goals with bundled payment linked to episodes

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of care along the cancer disease spectrum.[10] United Healthcare conducted a demonstration project in which episode payments and quality feedback replaced traditional FFS, and they observed overall costs that were approximately one third lower than projected. Interestingly, chemotherapy drug costs were higher than anticipated,[11] which highlights the complexity of understanding the myriad factors involved in clinical decision making and the challenges associated with attempting to model expected behavior.

The current payment system misaligns incentives among physicians, drug makers, payers, and patients for providing high-quality cancer care. Although there are historical reasons that led to the development of the present system, the time is ripe to develop, test, and implement a prescription for change. Rising health care costs that threaten access to high-quality care and increasing availability of electronic systems that capture quality process and outcome data allow us to imagine a path forward. A new system must provide high-quality care, must be accessible to all, and must be affordable to individual patients and society. High quality is defined as delivery of the optimal evidence-based treatment approach for each clinical cancer scenario by using a well-coordinated, multidisciplinary, patient-centered approach that results in desired patient outcomes. For the medical oncologist, this translates to emancipation from the FFS buy-and-bill system. For drug makers, this may simplify pricing and negotiation and increase the focus on evidence and value. For payers, efficiency and predictability may be enhanced, and complexity may be reduced. For patients, there would be increased confidence in delivery of high-value care that embodies evidenced-based decision making and patient-centeredness. The American Society of Clinical Oncology's recently proposed payment model would enable physicians and their practices to respond to the complex needs of patients with cancer at all points along the cancer care spectrum.[10,12] This proposal is based on a bundled payment design in which payments are related to the predetermined expected costs of a grouping, or bundle, of related health care services.[12] Embedded in this approach is the implicit recognition of the enormous array of services required by the patient with cancer at different points in the course of an illness (eg, care coordination, education, and counseling provided by nonphysicians and electronic communication with patients), apart from the office encounter and use of infusion facilities. An approach such as this represents a striking departure from the current FFS payment system that provides compensation only for face-to-face encounters and provision of parenteral, office-based infusion services. Bundling payments that are adjusted for the needs of the distinct phases of cancer care (eg, new patient, receiving treatment, after treatment, end of life), coupled with transparent quality metrics available to patients, physicians, and payers can facilitate evolution to a system that encourages provision of the appropriate number and types of services with quality of the outcomes representing the primary end point. Those demonstrating delivery of high-quality care could be rewarded. The flexibility inherent in this approach would encourage providers to use resources to coordinate care.

How do we get there? The gold standard that oncologists recognize in developing new cancer therapies is the prospective randomized trial. This approach to validation can be applied to health care delivery systems as well. It is likely that this level of evidence will be required as we seek to overhaul a system that is firmly entrenched among various stakeholders. The complexity of organizing such an endeavor to test the outcomes (intended and unintended) of a bundled payment system is apparent: it will involve physicians, payers, and our patients across a variety of practice settings. This can be accomplished. The question is whether the collective will exists to find a prescription for cure.

AUTHORS' DISCLOSURES OF POTENTIAL CONFLICTS OF INTEREST

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AUTHOR CONTRIBUTIONS

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